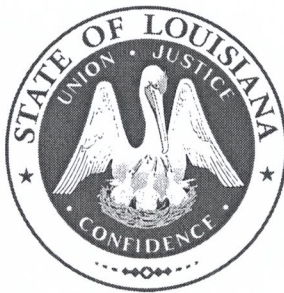


Members
Senator Sharon Hewitt, Chair
Senate District 1
Representative Malinda White
House District 75
Secretary Jack Montoucet,
Department of Wildlife & Fisheries
Michael Ellis, Executive Director
Coastal Protection & Restoration Auth.
Keith Lovell, Assistant Secretary
Department of Natural Resources
Jeff Dauzat, Administrator
Department of Environmental Quality
Patrick Landry, Deputy Assistant Secretary
Dept. of Transportation & Development
Councilman Perry Talley
Washington Parish
Gina Campo, Chief Administrative Officer
St. Tammany Parish



900 North 3rd Street
Baton Rouge, LA 70802
Telephone: (225) 342-2366

Staff
Stacy DeLaney, Secretary
Alan Miller, Attorney

Lower Pearl River Basin Task Force

September 5, 2018

Via Mail and Email

United States Army Corps of Engineers
ATTN: Major General Richard G. Kaiser
Commander, Mississippi Valley Division
1400 Walnut Street
Vicksburg, MS 39180

United States Army Corps of Engineers
ATTN: Colonel Michael C. Derosier
Commander, Vicksburg District
4155 Clay Street
Vicksburg, MS 39183

Watkins & Eager PLLC
ATTN: Mr. Keith Turner
Counsel to Rankin-Hinds Pearl River
Flood & Drainage Control District
400 East Capitol Street
Jackson, MS 39201

Dear General Kaiser, Colonel Derosier, and Mr. Turner:

SUBJECT: Rankin-Hinds Pearl River Flood & Drainage Control District - One Lake Proposal
Integrated Draft Feasibility & Environmental Impact Statement (DFEIS)

The Lower Pearl River Basin Task Force was created by Senate Resolution 219 of the 2017 Louisiana Legislature. The purpose of the task force is "to study and make recommendations to the legislature and federal agencies on the development of a long-term comprehensive master plan to address flood control and drainage issues, while preserving the Lower Pearl River Basin ecosystem." The task force is composed of the following members:

- (1) Senator Sharon Hewitt, appointed by the president of the Louisiana Senate, and who serves as chairperson.
- (2) Representative Malinda White, appointed by the speaker of the Louisiana House of Representatives.
- (3) Secretary Tom Harris of the Department of Natural Resources, or his designee.
- (4) Secretary Jack Montoucet of the Department of Wildlife and Fisheries, or his designee.
- (5) Secretary Chuck Carr Brown of the Department of Environmental Quality, or his designee.
- (6) Secretary Shawn Wilson of the Department of Transportation and Development, or his designee.
- (7) Executive Director Michael Ellis of the Coastal Protection and Restoration Authority, or his designee.
- (8) Washington Parish President Richard "Ned" Thomas, Jr., or his designee.
- (9) St. Tammany Parish President Pat Brister, or her designee.

Review of the Integrated Draft Feasibility Study and the Environmental Impact Statement (DFEIS) for the Pearl River Basin Federal Flood Risk Management Project (One Lake Project) proposed by the Rankin-Hinds Pearl River Flood & Drainage Control District (the District) in the State of Mississippi for any potential impacts on the Lower Pearl River clearly falls within the subject matter of the task force.

The United States Army Corps of Engineers and their local sponsor, the District, have proposed to build a flood control reservoir by making significant channel modifications on the Pearl River to create a 1900-acre lake. The water level of the newly created lake will be maintained by a weir at river mile 284 and minimum flow requirements set during the permitting process will be maintained by a 12 x 12 gate within the weir.

Please find attached specific comments and concerns on the proposed project from the various agencies, departments, and political subdivisions represented on this task force for submission during the DFEIS public comment period. Several themes emerged from their technical reviews:

1. The DFEIS addresses the impact to the Upper Pearl River Basin, but provides little consideration of the potential impacts to the water quantity and the water quality of the Lower Pearl River Basin within Louisiana. Adverse impacts to the water, sediment and nutrient loads carried by the Lower Pearl River could affect the health of our ecosystems that support a diversity of fish and wildlife. Discharge from the Pearl River into Lake Borgne, the Mississippi Sound and the Biloxi Marshes is critical to maintaining the habitat for commercially valuable oyster and shrimp fisheries. Changes to the depths, duration, and frequency of flooding may adversely affect the industries and recreational opportunities on the Pearl. And finally, the loss of coastal wetlands supported by the Pearl River could increase flood risk and storm surge and may hinder coastal restoration efforts.

2. The construction and operation of the proposed project may have reasonably foreseeable effects on coastal land use, water use, and natural resources of the Louisiana Coastal Zone. Hence, we believe a consistency determination is necessary, pursuant to the Coastal Zone Management Act of 1972.

3. Additional information is needed to evaluate the water quality, water quantity, and sediment issues in the Lower Pearl River during project construction.

4. Consideration of downstream mitigation projects and true river restoration that could benefit riverine species should be fully evaluated, along with cost/benefit comparisons. In addition to fish passages to improve migration access at the newly proposed weir and the existing weir at Poole's Bluff, sill removal at Poole's Bluff and the Bogue Chitto River should be considered.

5. Protection of rare, threatened, and endangered species such as the Gulf sturgeon and the Inflated Heelsplitter remain a concern. In addition, Louisiana has identified 47 species of concern in the Lower Pearl River Watershed.

6. Sufficient details have not been provided on how the three hazardous waste sites will be mitigated and the potential short-term and long-term impacts to water quality due to releases from these sites during and after construction.

7. The impact of the potential population growth and future development along the shoreline of the new reservoir on minimum flowrates downstream have not been taken into account.

Additional details are provided in the attached letters.

I appreciate the efforts of the District to inform the Lower Pearl River Basin Task Force and our community along the Lower Pearl River about the project and the District's commitment to address our concerns. And I am committed to continuing to work with the District as this process moves forward. However, given the technical concerns raised by the members of the task force and the uncertainty as to how this project will affect the Lower Pearl River downstream of the proposed project, I cannot support this project as currently proposed.

Also attached is Senate Concurrent Resolution 5 of the 2018 Regular Session of the Louisiana Legislature in opposition of the One Lake project.

Please feel free to contact me at 985-646-6490 or at hewitts@legis.la.gov if you have any questions regarding this matter.

Sincerely,



Sharon W. Hewitt
Louisiana State Senator, District 1
Chairman, Lower Pearl River Basin Task Force

ATTACHMENTS

cc: Louisiana Congressional Delegation

The Honorable Bill Cassidy
The Honorable John N. Kennedy
The Honorable Steve Scalise
The Honorable Cedric Richmond
The Honorable Ralph Abraham
The Honorable Garrett Graves
The Honorable Clay Higgins
The Honorable Mike Johnson

Lower Pearl River Basin Task Force members

Representative Malinda White
Secretary Jack Montoucet, LDWF
Michael Ellis, CPRA
Keith Lovell, LDNR
Jeff Dauzat, LDEQ
Patrick Landry, LDOTD
Councilman Perry Talley, Washington Parish
Gina Campo, CAO St. Tammany Parish



State of Louisiana

JOHN BEL EDWARDS
GOVERNOR

August 31, 2018

Major General Richard G. Kaiser
Commander, Mississippi Valley Division
United States Army Corps of Engineers
1400 Walnut Street
Vicksburg, Mississippi 39180
Cemvd-pa@usace.army.mil

Colonel Michael C. Derosier
Commander, Vicksburg District
United States Army Corps of Engineers
4155 Clay Street
Vicksburg, Mississippi 39183
Cemvk-pa@usace.army.mil

Keith Turner
Watkins and Eager PLLC
400 East Capitol Street
Jackson, Mississippi 39201
kturner@watkinseager.com
Counsel to the Rankin-Hinds Pearl River Flood and Drainage Control District

RE: Integrated Draft Feasibility & Environmental Impact Statement; Pearl River Basin, Mississippi
Federal Flood Risk Management Project Hinds and Rankin Counties, MS; Rankin-Hinds Pearl River Flood
& Drainage Control District - One Lake Project Proposal

Dear General Kaiser, Colonel Derosier, and Mr. Turner:

Louisiana's Coastal Protection and Restoration Authority (CPRA) has been informed of the release of a Draft Environmental Impact Statement (DEIS) for the One Lake Flood Control Project (Project) proposed by the Rankin-Hinds Pearl River Flood Control Drainage District (District), which evaluates potential flood control alternatives for Jackson, Mississippi and the surrounding area. According to the DEIS, the selected alternative is a 1,500 acre lake to be constructed on the Pearl River. The water level of the newly created lake will be maintained by a weir at river-mile 284 and minimum flow requirements set during the permitting process will be maintained by a gate within the weir. CPRA is concerned that the DEIS does not adequately address several issues raised by us and others during the public scoping process. We believe and request the following concerns must be addressed both in terms of potential impacts and potential mitigation before any final EIS can be completed.

As part of CPRA's 2017 Coastal Master Plan, an extensive non-structural program proposed to address flood risk and resiliency for our coastal communities. The Master Plan proposal includes 1,400 floodproofings, 22,400 elevations, and 2,400 voluntary acquisitions of property. The non-structural alternative evaluated in the DEIS featured only buy-outs of property, which was deemed unsuitable due to logistics and cost. CPRA recommends the alternative be reevaluated to include structure elevation and floodproofing as less severe non-structural plans to determine if this alternative is viable. We do not believe that simply evaluating an alternative based on buying out every affected structure adequately meets the NEPA requirement of a non-structural alternative evaluation.

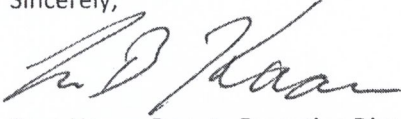
CPRA would like to see the Downstream Impacts Fact Sheet expanded and formally added to the DEIS so it can be added to the record. The DEIS, as presented, focuses on the project area as defined in and around Jackson, Mississippi. However, the environmental impacts of the proposed project will be felt further downstream of this project area. While mentioned briefly in the DEIS and in a supplemental fact sheet, CPRA believes this discussion should be expanded and given its own subsection in the DEIS. Within this measure, it has been stated publicly that extensive modeling of downstream impacts has been conducted; however, this modeling has not been captured by the DEIS or appendices. In the past, CPRA has used modeling tools such as Integrated Compartment Models to capture floodplain responses to changes in river hydrology. We believe this approach should be taken for this project to address downstream, coastal and nearshore project impacts. .

CPRA would like to review the Sediment Management Plan before it is finalized to ensure that sediment-starved Louisiana wetlands are not further impacted. Outside of the Mississippi River, the Pearl River is the largest driver of sediment to wetlands within the Pontchartrain Basin. Lowering water velocities on the Pearl River as a result of proposed project implementation will cause sediment to fall out of suspension and collect in the project area. At the time of the DEIS publication, the District has no plan for removal of sediment but has stated that one will be needed. CPRA would like to ensure that this project will not affect Louisiana's already fragile wetlands. We would also stress the need for this sediment in the lower reaches of the Pearl River and Coastal Louisiana and Mississippi. The potential for reduced sediment transport to these areas and its effect on coastal wetlands should be thoroughly evaluated and discussed as part of the DEIS. Lastly, CPRA is concerned about the storage capacity of the newly created One Lake storage pool and how that might impact flooding on downstream communities in Louisiana and Mississippi. The DEIS does not address the total volume of the newly created system but frequently cites the 1979 Flood of Record as the need for the project. The District should ensure that the floodwater storage area will not exceed its planned capacity and result in large, potentially catastrophic pulse floods downstream of the reservoir if the District must release floodwaters to ease flood pressure in Jackson.

The Louisiana Coastal Protection and Restoration Authority keenly understands the need for flood control to protect our communities, citizens, and businesses and supports the District in achieving this important goal in a manner that does not compromise our ability to carry out our mission. We look forward to cooperating with the District to ensure the best path forward for all parties.

If you have any questions or concerns regarding the comments put forth by CPRA, please feel free to contact Justin Merrifield, Coastal Resources Scientist Supervisor, at (225)342-4629 or Justin.Merrifield@la.gov

Sincerely,

A handwritten signature in black ink, appearing to read "Bren Haase". The signature is fluid and cursive, with the first name "Bren" and last name "Haase" clearly distinguishable.

Bren Haase, Deputy Executive Director
Louisiana Coastal Protection and Restoration Authority

JOHN BEL EDWARDS
GOVERNOR



CHUCK CARR BROWN, PH.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF THE SECRETARY

August 24, 2018

Major General Richard G. Kaiser
Commander, Mississippi Valley Division
United States Army Corps of Engineers
1400 Walnut Street
Vicksburg, Mississippi 39180
cemvd-pa@usace.army.mil

Colonel Michael C. Derosier
Commander, Vicksburg District
United States Army Corps of Engineers
4155 Clay Street
Vicksburg, Mississippi 39183
cemvk-pa@usace.army.mil

Keith Turner
Watkins & Eager PLLC
400 East Capitol Street
Jackson Mississippi 39201
kturner@watkinseager.com
Counsel to the Rankin-Hinds Pearl
River Flood & Drainage Control District

RE: Integrated Draft Feasibility & Environmental Impact Statement; Pearl River Basin, Mississippi
Federal Flood Risk Management Project Hinds and Rankin Counties, MS; Rankin-Hinds Pearl River
Flood & Drainage Control District - One Lake Project Proposal

Dear General Kaiser, Colonel Derosier, and Mr. Turner:

The Louisiana Department of Environmental Quality (LDEQ), Office of Environmental Assessment, Office of Environmental Compliance and Office of Environmental Services reviewed the Integrated Draft Feasibility Study and Environmental Impact Statement (DFEIS) for the Pearl River Basin Federal Flood Risk Management Project, herein referred to as One Lake Project. LDEQ assessed potential impacts to the Lower Pearl River Basin within Louisiana based upon the DFEIS and local, historical knowledge of the Lower Pearl River Basin. LDEQ assessed impacts solely within the regulatory jurisdiction of the LDEQ, which includes Water, Air and Waste programs and has the following comments based upon the aforementioned project.

As required by the National Environmental Policy Act (NEPA), the Rankin-Hinds Pearl River Flood and Drainage Control District prepared a DFEIS. The DFEIS addressed the impact to the Upper Pearl River Basin but falls short in consideration to the potential impacts to the water quantity and the water quality of the Lower Pearl River Basin within Louisiana. To provide the impact of the One Lake Project on the Lower Pearl River Basin, a thorough environmental impact assessment on essential additional information is needed, specifically:

- ***Additional Information is requested, describing how flow will be managed to prevent and/or mitigate impacts to water quantity in the Lower Pearl River during project construction.*** The Study area, as described on page 20 of the DFEIS, does not specifically include the downstream reaches of the Pearl River in Louisiana. Downstream flows are only briefly discussed in Appendix C – Water Quantity Assessment utilizing existing data from the Ross Barnett Reservoir. The Downstream Impacts Analysis Fact Sheet located on the Rankin-Hinds website states assumptions that the project, “once constructed”, would not impact the water quantity and was based solely on minimum flow requirements from the Ross Barnett Reservoir and evaporation estimates. The Fact Sheet addresses only *post-project* construction impacts to water quantity. The DFEIS does not address potential impacts to water quantity *during construction* of Alternative C, the Tentatively Selected Plan (TSP).
- ***Additional Information is requested, describing and evaluating the water quality in the Lower Pearl River during project construction.*** The DFEIS does not adequately address potential impacts to water quality in the portion of the Lower Pearl River Basin within Louisiana, and within the project area, during the construction of the TSP. Page 1 of the DFEIS, Appendix D: Environmental Water Quality states: “In this report, historical and existing water quality conditions are described and evaluated for the Pearl River and its tributaries from the Ross Barnett Reservoir dam to approximately mile 280 on the Pearl River, that is, the Study Area (see Figure 1-1 in the FS/EIS).” And “Taking into consideration each of the proposed alternatives, water quality modeling was used to project water quality conditions of the Pearl River near Jackson”¹.
- ***Consideration of minimum low flows must be given to major downstream facilities which discharge to and/or utilize the lower Pearl River as a water source.*** Two major facilities, which discharge storm water and waste water into the lower Pearl River near Bogalusa, Louisiana, may potentially be impacted as a result of reduced flows. Their LDEQ issued water quality permit limitations are based upon calculated critical low flow of 1,260 cubic feet per second (cfs). Flow below this minimum rate could impose much stricter permit limitations upon the quantity and quality of their discharge. Page 78 of the DFEIS, Appendix C: Engineering states “the Ross Barnett Reservoir has not reduced the mean annual volume of water received by the Lower Pearl River Basin.” An analysis of temporally varying critical low flows (the 7Q10, for example) and the trends before and after reservoir construction, rather than mean annual flow, would be more relevant to LDEQ for permitting. The DFEIS discusses the purpose of the installation of a 12’X12’ gate within the relocated weir to maintain minimum low flows pursuant to permitted requirements of the J.H. Fewell Water Treatment Plant near Jackson, Mississippi but no such consideration was provided for downstream facilities.

- ***Additional information describing how the potential channel stability and sediment issues will be addressed in the project area during and post construction. This description should also address channel hydraulics and sediment transport during seasonal periods of high flow and downstream impacts.*** The DFEIS indicates on page 117, Section 3.6.3 Alternative B (Levee Plan) additional floodwalls and conveyance improvements would be constructed. However, there will still be a “risk of overtopping or failure in levee sections during extreme events”. Additionally, the DFEIS states in Section 4.5.2.4 Channel Stability (Erosion and Sedimentation), page 177, Alternative B, direct and indirect impacts: “Structural measures such as levees and floodwalls could have some impact on channel stability. The clearing and conveyance improvements from RM 293.5 to RM 302.0 could increase overbank erosion and accelerate bank erosion in this reach due to removal of vegetation. In addition, with the construction of these features, velocities of flood flows will increase, increasing the possibility of erosion.” According to the DFEIS on page 121, Section 3.6.4 Alternative C - TSP (Channel Improvement/Weir/Levee Plan), 2,500 acres will be disturbed by “Clearing and Grubbing” and 25 million cubic yards by “Excavation/Levee”. The time frame during which “Clearing and Grubbing” and “Excavation/Levee” activities would occur is not specified. However, it is reasonable to assume the timetable for activities will occur over months to years. Most of these activities will occur within the flood plain of the Pearl River. The DFEIS states in Section 4.5.2.4 Channel Stability (Erosion and Sedimentation), page 177, Alternative C - TSP, Direct and Indirect Impacts: “Due to channel excavation and change in potential hydraulic parameters, a more detailed analysis was performed for this alternative. Structural measures such as levees, channel excavation, and construction of an in-channel weir were analyzed to preliminarily determine impacts of channel stability upstream and downstream of the Project Area. Based on the results of this preliminary assessment, it is believed there may be some potential channel stability and sediment issues that will have to be addressed in the project area.”
- ***Further clarification of the meaning of the term “flowline” and the related activity necessary to relocate these “flowlines” will be required to fully assess the potential effect of this activity.*** Section 3.6.4 Alternative C – TSP (Channel Improvement/Weir/Levee Plan) also mentions “lowering flowlines through the reach.” The term “flowline” is used in oil and gas exploration activities and indicates pipe lines which carry crude oil, gas, and produced water from a well to a production facility. If released or spilled, crude oil and produced water can cause significant negative environmental impacts. However, the DFEIS does not identify what is in the flowlines, how the flowlines will be lowered to prevent releases or spills, or any direct or indirect impacts from “lowering flowlines”.
- ***The current DFEIS does not provide sufficient details on how the three HTRW sites will be mitigated and does not address the potential short term and long term impacts to water quality within the project area and in the lower Pearl River due to releases from the above HTRW sites during and after the construction of Alternative C - TSP.*** Section 4.3.4 Historical Sites Within the Project Study Area, on pages 139 – 141, identifies three sites within the project area: The *Gulf States Creosote Company Site*; the unpermitted *Lefleur’s Landing Site*; and the unpermitted *Gallatin Street Landfill Site*. These sites are all identified as Hazardous, Toxic and Radiological Waste (HTRW) sites in Section 4.5.14, on pages 221 – 223. The DFEIS identified both inorganic and organic hazardous substances at the *Gulf States Creosote Company Site*. Regarding this site,

the DFEIS states: "The site, or portions thereof, may require avoidance, remediation, or some other mitigating measures." The *Lefleur's Landing Site* was concluded to be "a source of waste residuals and chemicals entering the Pearl River." Regarding this site, the DFEIS states: "Further investigations would be necessary to determine potential leaching of landfill waste chemicals to the groundwater and any movement of the groundwater into the proposed channel improvement." Leachate containing elevated levels of cadmium, lead, and nickel were documented to be in groundwater associated with the *Gallatin Street Landfill Site*. Regarding this site, the DFEIS states: "The proposed channel improvement excavation area would also bisect the unpermitted *Gallatin Street Landfill Site*; therefore, excavation and removal of approximately half of the landfill site would be required to construct the proposed channel improvement. This excavated material would then be incorporated into the current remaining landfill area to further elevate the area, cap the area, and provide bank stabilization. Further investigations may be required to determine potential leaching of landfill waste chemicals to the groundwater and movement of the groundwater into the proposed channel improvement area prior to the initiation of excavation activities at this location." Further complicating the risk to the lower Pearl River is the fact that the three previously mentioned HTRW sites will be inundated during seasonal high river flows.

Based upon the aforementioned information, LDEQ respectfully requests that more information be provided to clearly understand this project's potential impact upon the Lower Pearl River Basin in Louisiana. Without this additional information, the LDEQ cannot support this proposed project.

If you have any questions regarding this matter, please feel free to contact Jeff J. Dauzat, Administrator, Emergency and Radiological Services Division at (225) 219-2966 or by email at Jeff.Dauzat@la.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Chuck Carr Brown', with a stylized flourish at the end.

Chuck Carr Brown, Ph.D.
Secretary
Louisiana Dept. of Environmental Quality

JOHN BEL EDWARDS
GOVERNOR



THOMAS F. HARRIS
SECRETARY

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF THE SECRETARY

August 31, 2018

Rankin-Hinds Pearl River Flood and Drainage Control District
2101 Airport Rd N
Flowood, MS 39232

**RE: Integrated Draft Feasibility & Environmental Impact Statement
Pearl River Basin, Mississippi
Federal Flood Risk Management Project
Hinds and Rankin Counties, MS**

Dear Sir/Madam:

The Surface Water Management Program of the Louisiana Department of Natural Resources (LDNR) has the responsibility of coordinating the Louisiana state agencies comments on federal license or permit applications that would impact surface water resources within the State of Louisiana. The sustainable use, development and the multiplicity of interests competing for the surface water resources of the state is something that Louisiana takes very seriously. The State of Louisiana is determined to ensure that the proper management of our surface water resources is performed in a sound and sustainable manner, and is protective of commerce, the wildlife and fisheries resources of the State and the environment.

This letter represents the LDNR's Surface Water Management Program comments on the "Integrated Draft Feasibility & Environmental Impact Statement for the Pearl River Basin Federal Flood Risk Management Project in Hinds and Rankin Counties, Mississippi."

The United States Army Corps of Engineers and their local sponsor, the Rankin-Hinds Pearl River Flood and Drainage Control District, propose to build a flood control reservoir and make significant channel modifications on the Pearl River between River Mile 284 and 293.5. The proposed reservoir would be sited directly downstream from the Ross-Barnett Reservoir. Its stated purpose would be to mitigate future flood risk in the greater Jackson Metropolitan Area.

Based upon our review of the Draft FS/EIS, the LDNR has the following comments:

1. The Draft FS/EIS and associated Downstream Impacts Analysis Fact Sheet present a preliminary assessment of the impacts that the proposed flood control reservoir may have on

downstream flow, specifically the impact at lower flow regimes. The studies, however, do not evaluate the impacts that the proposed reservoir will have during flood (e.g. peak flow) events. Flood events are part of a natural cycle that is necessary for the Bogue Chitto National Wildlife Preserve and Pearl River Wildlife Management Area to thrive. They also affect the geomorphology of the channels, flood plain and estuarine environment. Attenuation of peak flows in the Lower Pearl River would result in areas, which were previously inundated, to remain drier for longer periods of time.

2. The Draft FS/EIS does not assess the potential implications that the proposed flood control reservoir may have on the watershed under possible climatic change scenarios. The 50-year project life expectancy coincides with predicted sea level and climatic changes that should be taken into consideration.
3. As indicated in the Allen Engineering and Science 2014 report (Appendix C of the FS/EIS), the excavation of the Pearl River will alter the local hydrogeology. This is particularly significant when considering the proximity of the Jefferson Street Landfill, the Gallatin Street Landfill and the Gulf State Creosoting Company site from the proposed project. The Surface Water Management Program supports the recommendation included in the report that further investigation is necessary prior to this project to go ahead. This additional information is necessary to evaluate the potential risk posed to the Pearl River water quality under alternative C. More specifically, the Surface Water Management Program is interested in what remedial steps will be taken to minimize impact and to be protective of human health and the environment.
4. The downstream minimum flow regime proposed for the relocated weir, under Alternative C, and in accordance with the Consent Decree between the US Environmental Protection Agency and the City of Jackson for the Savannah Water Treatment Plan, does not take into account the potential population growth presented in the report.
5. Similarly, the study does not research the impact of future development along the shoreline of the new reservoir. This may have significant implication for the Total Maximum Daily Loads (TMDLs) downstream of the relocated weir and the necessary minimum flow regime.

In summary, we recommend that the United States Army Corps of Engineers and their local sponsor perform additional studies prior to considering moving onto the design phase of the Tentatively Selected Plan. This recommendation is made largely due to the questions that remain unanswered as to the viability of the proposed Alternative C.

We appreciate the opportunity to provide comments on these proposed activities and look forward to working with you to resolve any challenges that may arise. You may contact LDNR's hydrologist, Thomas Van Biersel, Ph.D., P.G. [email: thomas.vanbiersel@la.gov or (225) 342-1813] if you have any questions regarding these comments.

Sincerely,



Keith Lovell
Assistant Secretary
Office of Coastal Management



State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

August 31, 2018

Rankin-Hinds Pearl River Flood and Drainage Control District
P. O. Box 320790
Flowood, MS 39232

RE: C20180088 Coastal Zone Consistency
Integrated Draft Feasibility & Environmental Impact Statement
Pearl River Basin, Mississippi
Federal Flood Risk Management Project
Hinds and Rankin Counties, MS

Dear Sir/Madam:

The Louisiana Department of Natural Resources, Office of Coastal Management (OCM), is responsible for administering the Louisiana Coastal Resources Program (LCRP), a Federally approved coastal management program. The Coastal Zone Management Act of 1972, as amended, requires that any Federal agency activity, wherever located, must be consistent with the approved coastal management program of any affected State (15 CFR §930.155(a)).

The United States Army Corps of Engineers and their local sponsor, the Rankin-Hinds Pearl River Flood and Drainage Control District, propose to build a flood control reservoir and make significant channel modifications on the Pearl River between River, immediately downstream from the Ross-Barnett Reservoir. Its stated purpose would be to mitigate future flood risk in the greater Jackson, MS, metropolitan area.

OCM has reviewed the "Integrated Draft Feasibility & Environmental Impact Statement for the Pearl River Basin Federal Flood Risk Management Project in Hinds and Rankin Counties, Mississippi," and offers the following preliminary comments.

- 1 OCM is concerned that the construction and operation of the proposed project may have reasonably foreseeable effects on coastal land use, water use, and natural resources of the Louisiana Coastal Zone. This Draft FS/EIS does not adequately address the potential effects to the coastal resources of the Louisiana's Coastal Zone.
- 2 Construction and operation of the proposed dam may result in adverse impacts to the water, sediment and nutrient loads carried by the lower Pearl River into Louisiana marshes, bottomland hardwoods and swamp forests along its lower course. Sediment and nutrients are exchanged with these ecosystems during flood and non-flood stages,

- supporting a diversity of fish and wildlife. Lake Borgne, Mississippi Sound and the Biloxi Marshes are also dependent on the discharge from the Pearl River, to maintain habitat for marine and saline marsh organisms including commercially valuable oyster and shrimp fisheries.
- 3 Construction and operation of the proposed dam, and the resultant development near the reservoir, may result in downstream changes to water quality, stream flow, sediment and nutrient loads, bankline erosion, flood stages, and salinities. Changes to the depths, duration and frequency of flooding may adversely affect dependent wetland and marine ecosystems, and the industries and recreational opportunities based upon them.
 - 4 Coastal wetlands supported by the Pearl River provide a buffer to storm surge. The proposed project may interfere with Louisiana's efforts to reduce flood risk, may hinder coastal restoration efforts, and may exacerbate the already catastrophic loss of the State's wetlands due to erosion and relative sea level rise.
 - 5 The Louisiana Coastal Resources Program specifically identifies "Activities affecting or altering surface runoff quality or quantity in the coastal watershed, and in the coastal zone" as being Federal activities which may be considered to directly affect the Louisiana coastal zone. After review of the Draft FS/EIS and associated Downstream Impacts Analysis Fact Sheet, the OCM has determined that the proposed construction and operation of the proposed dam is subject to the LCRP.
 - 6 In light of these concerns, on July 19, 2018, the OCM Consistency Section sent a letter to Colonel Michael C. Derosier, Commander, U. S. Army Corps of Engineers-Vicksburg District, requesting that a consistency determination be submitted pursuant to the Coastal Zone Management Act of 1972, as amended, to ensure that the proposed project is consistent with Louisiana's approved Coastal Management Program. In preparing this consistency determination, the Corps of Engineers must ensure that all reasonably foreseeable effects of the proposed project, including direct, indirect and cumulative effects, are fully consistent with the LCRP.

We appreciate the opportunity to provide comments on these proposed activities. The OCM is available to work the Vicksburg District and the local sponsor in the preparation of the consistency determination. Please contact Jeff Harris of the Consistency Section at (225) 342-7949, or jeff.harris@la.gov if you have any questions regarding these comments.

Sincerely,



Keith Lovell
Assistant Secretary
Office of Coastal Management

**JOHN BEL EDWARDS
GOVERNOR**



**JACK MONToucET
SECRETARY**

PO BOX 98000 | BATON ROUGE LA | 70898

28 August 2018

Rankin Hinds Pearl River Flood Control and Drainage Control District
Attn: Mr. Keith Turner
P.O. Box 320790
Flowood, MS 39232

RE: Pearl River Basin, Mississippi, Control Project, Integrated Draft Feasibility Study/Environmental Impact Statement Review

Mr. Turner:

The Louisiana Department of Wildlife and Fisheries' (LDWF) evaluation of the Integrated Draft Feasibility Study and Environmental Impact Statement Pearl River Watershed, Hinds and Rankin Counties, MS (FS/EIS), primarily addresses section 2, 4, and 5, and the Biological Assessment section in Appendix D - Environmental. The FS/EIS briefly addresses flow, evaporation, channel geomorphic assessments, and sediment loads and composition in sections 2.5.2 and 4.5.2, and Appendix D – Environmental. The Louisiana Coastal Protection and Restoration Authority (CPRA), the Louisiana Department of Natural Resources Office of Coastal Management (DNR/OCM), and the consistency determination process are state agencies' or regulatory processes that may provide further guidance on these issues. LDWF is particularly concerned about changes in the amount and timing of freshwater discharge into the Mississippi Sound, where considerable oyster resources are located, and about habitat usage by migratory fish as well as rare, threatened and endangered species that occur in the Pearl River.

The primary study area on the Pearl River watershed is between river mile (RM) 280.0 and RM 301.77 (i.e., 21.77 miles of aquatic riverine habitat). The proposed project area is located in the Upper Middle Pearl River sub-basin, and downstream impacts to the Lower Pearl River sub-basin are only briefly addressed in the study. LDWF believes a comprehensive evaluation of downstream impacts is necessary to complete the FS/EIS.

Marine Resources in the Mississippi Sound:

The Mississippi Sound area (i.e., Halfmoon Island/Grassy Island/Petit Island/Grand Banks), which is currently productive for oysters, depends on freshwater from the Pearl River to thrive. The addition of impoundments along the watershed have the effect of delaying seasonal river cycles, reducing range of flows, and reducing overall flow, all of which may impact estuarine resources. Changes to the timing and volume of river inputs into the estuary could affect the crucial balance of a system that currently provides an excellent habitat for oysters, as well as a variety of fish, shrimp, crabs, and other organisms in both Mississippi and Louisiana state waters, which support important fisheries for both states.

Migratory Fish:

Sixteen different species of migratory fish, anadromous, catadromous, and potadromous, utilize the Pearl River basin. The proposed relocation of the low head weir, resulting in the conversion of swift water (riverine) habitats to slackwater (lacustrine) habitats will adversely affect riverine fish and mussel communities. The project area is located in viable riverine habitat which is currently classified as Critical Habitat for Gulf sturgeon. Consideration of restoration efforts to migratory routes in the lower sub-basin (e.g., sill removal) are necessary when evaluating the impacts of this project. It is counter-intuitive to consider the elimination of riverine habitat upriver while restoration efforts progress in the lower sub-basin that are intended to improve access to those riverine areas for migratory fish species.

Rare, Threatened and Endangered Species:

The project area is located within the Critical Habitat designation for the Gulf sturgeon (*Acipenser oxyrinchus*). Efforts to minimize this designation in the project documents (sections 2.2.6.2, 2.5.7.1) should be based on quantifiable analysis and not merely on anecdotal accounts; additional seasonal sampling would be necessary to confirm whether Gulf sturgeon utilize habitats in the Upper Middle Pearl River sub-basin at the current time. Though the existing sills within the lower segment of the Pearl River basin do limit fish migration, passage does take place. This study should also consider efforts to improve utilization of these riverine stretches through removal of sills in the lower Pearl River sub-basin as part of the potential baseline for proposed impacted area.

The Inflated Heelsplitter (*Potamilus inflatus*) is considered critically imperiled in the state of Louisiana. Limiting the movement of the freshwater drum (*Aplodinotus grunniens*), host fish to the Inflated Heelsplitter, would limit potential distribution of this threatened species. In addition to these federally listed species, Louisiana has identified 47 species of concern in the Lower Pearl River Watershed.

Invasive Aquatic Vegetation:

The shallow areas of the new reservoir and other protected coves would create new habitat and refuge for noxious invasive aquatic weed species (e.g., Giant salvinia), for which Louisiana spends millions of dollars per year to control/eradicate. Terrestrial invasive vegetation is addressed, but aquatic invasive vegetation is not addressed in the FS/EIS.

Downstream Mitigation:

LDWF is concerned about the direct, indirect and cumulative impacts of the proposed reservoir. Critical Habitat should be addressed and not minimized. The FS/EIS proposed mitigation options are limited to constructing fish passages to improve access at both the newly proposed weir and the existing weir at Poole's Bluff. Consideration of downstream mitigation projects and true river restoration that could benefit riverine species, e.g., sill removal at Poole's Bluff and the Bogue Chitto River, should be included; along with cost-benefit comparison of fish passage construction at Poole's Bluff versus total sill removal. In addition, insufficient information has been provided concerning the mitigation of wetlands and waters impacted by the construction and maintenance of the Pearl River Basin, Mississippi, and Federal Flood Risk Management Project. Given the extensive nature of those impacts, and the project's potential for secondary impacts to Louisiana's natural resources, the FS/EIS must provide a complete mitigation plan for agency review.

Additionally, river-floodplain connectivity is important to the ecology of the Pearl River watershed. Therefore, it should be demonstrated that the proposed project will not decrease lateral exchange of energy, material and organisms between fluvial and floodplain systems. This is especially concerning in Louisiana where a national wildlife refuge, state wildlife management area and several state designated natural and scenic rivers are located along the Pearl River and/or its tributary and distributary channels. Any losses of connectivity or further floodplain isolation shall be quantified and mitigated.

Construction Concerns:

The FS/EIS must detail the measures taken to ensure that minimum flow rates, acceptable levels of suspended sediments, appropriate water temperatures, adequate dissolved oxygen levels, etc., are maintained downstream of the proposed flood risk management project while construction activities are underway. Given the potential for secondary impacts to downstream waters and adjacent habitats, details concerning the design and operation of the low flow gates must be provided.

Monitoring:

LDWF strongly recommends that the FS/EIS include construction and post-construction monitoring and adaptive management plans aimed at assessing and mitigating secondary

impacts to the Pearl River and its adjacent habitats downstream of the proposed weir. Concerns to be addressed in those plans include, but are not limited to, changes in the level of suspended sediments, water temperatures, dissolved oxygen levels, erosion rates, changes to the timing and volume of river inputs, etc.

The Louisiana Department of Wildlife and Fisheries seeks to work with you in a cooperative manner. Please do not hesitate to contact Matt Weigel (985-543-4931) of our Habitat Section should you need further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Jack Montoucet", written over a horizontal line.

Jack Montoucet
Secretary



Office of the Secretary
PO Box 94245 | Baton Rouge, LA 70804-9245
ph: 225-379-1200 | fx: 225-379-1851

John Bel Edwards, Governor
Shawn D. Wilson, Ph.D., Secretary

September 4, 2018

Rankin-Hinds Pearl River Flood and Drainage Control District
2101 Airport Road N
Flowood, MS 39232

**RE: Integrated Draft Feasibility & Environmental Impact Statement
Pearl River Basin, Mississippi
Federal Flood Risk Management Project
Hinds and Rankins Counties, MS**

Dear Sir/Madam:

The Louisiana Department of Transportation and Development (LaDOTD) is the state agency responsible for administering and coordinating all public works projects which include: The Louisiana Dam Safety Program, the Statewide Flood Control Program, the levee inspection program for all levee districts outside of the Louisiana Coastal Zone and the National Flood Insurance Program (NFIP), which was created by FEMA several years ago. Additionally, the Public Works Section of DOTD is responsible for review of all hydraulics design on all state roads and bridges.

This letter represents LaDOTD's comments on the "Integrated Draft Feasibility & Environmental Impact Statement" for the Pearl River Basin Federal Flood Risk Management Project in Hinds and Rankin Counties, Mississippi.

The proposed project includes construction of a flood control reservoir downstream of the existing Ross Barnett Reservoir between River Mile Markers 284 and 293 with an intended purpose of mitigating future flood risks in the area in and around Jackson, Mississippi.

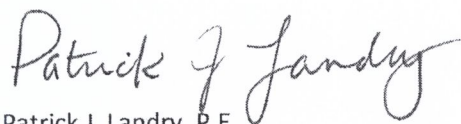
LaDOTD provides the following comments regarding the Draft FS/EIS:

1. Due to significant flooding in March and August 2016, LaDOTD along with four other state agencies (GOSHEP, Office of Community Development, Coastal Protection and Restoration Authority and the Department of Wildlife and Fisheries) has formed a coalition based on an Executive Order by Governor John Bel Edwards, titled **The Louisiana Watershed Initiative**, which will model all of the watersheds across the state based on the HUC 8 sub basin level. There are 59 watersheds that fall within state boundaries and several are located in the vicinity of the Lower Pearl River Basin, which will be impacted by the proposed project. Specifically, those impacted watersheds are the Liberty-Tchefuncta watershed, Lower Pearl watershed and the Bogue Chitto watershed. Major infrastructure improvements, as those proposed in this project will have significant impacts on these watersheds. Currently, the **Louisiana Watershed Initiative** plans to enter into contracts with consulting firms next year to initiate surveys and modeling efforts.

2. During low water or draught periods when flows are less from the upstream dam of the Pearl River, sedimentation transportation in the river will be affected. Changes in sedimentation and sedimentation patterns in the river could affect future flooding patterns, navigation routes, channel maintenance costs, bank erosion, and flows and erosion near and at bridges on Parish and State Roads, and Federal and Louisiana State Highways. Changes in flooding patterns will directly affect road flooding, including emergency access routes during floods.
3. During large releases from a dam in the upper basin, both scour and changes in scour patterns at bridges and nearby corresponding access ramps on Parish and State Roads, and Federal and Louisiana State Highway will occur. Scour and changes in scour patterns at bridges and nearby ramps and roads will affect maintenance and inspection costs, including the necessity for costly changes at existing bridges and adjoining roads. Worse case scenarios can include costs for replacement of bridges which may become unsafe due to scour.
4. The effects on downstream flooding due to releases from a large dam during hurricanes or large storms, especially after heavy rains from storms that have tracked through the coastal parishes and have already dropped large amounts of precipitation, will affect how Louisiana manages floods and navigation on the Pearl River during high water periods (i.e.- storms from the gulf coast that track through the eastern parishes in Louisiana - Washington, St Tammany, Orleans and St Bernard). There are costs to changing flood control procedures, flood control structures and preparation for periods of flooding along the Pearl River. Changes affecting the lower Pearl River basin may also require reassessment of the current flood protection including construction of additional flood control structures and embankments in communities along the Pearl River.
5. Additionally, changes in flood flows along the Pearl River may affect releases through Lake Pontchartrian, which may affect flood control along the Mississippi River and may affect flooding along the shores of Lakes Pontchartrian and Borgne and the Rigolets in St Tammany Parish. Changes in releases through Lakes Pontchartrian and Borgne could also affect navigation, recreation and water quality in those water bodies, and may affect the ground water near Lakes Pontchartrian and Borgne and in the Rigolets in Saint Tammany Parish.

We appreciate the opportunity to comment on the proposed infrastructure project and look forward to working with you to resolve outstanding issues that we feel may arise with the construction.

Sincerely,



Patrick J. Landry, P.E.

Deputy Assistant Secretary, Office of Public Works



ST. TAMMANY PARISH

PATRICIA P. BRISTER
PARISH PRESIDENT

September 6, 2018

Major General Richard G. Kaiser
Commander, Mississippi Valley Division
U.S. Army Corps of Engineers
1400 Walnut Street
Vicksburg, Mississippi 39180
cemvk-pa@usace.army.mil
(601) 631-5053

Colonel Michael C. Derosier
Commander, Vicksburg District
4155 Clay Street
Vicksburg, Mississippi 39183

Rankin Hinds Pearl River Flood Control & Drainage District
Post Office Box 320790
Flowood, Mississippi 39232
kturner@watkinseager.com
(601) 594-6894

Gentlemen,

St. Tammany Parish wishes to thank you for the opportunity to provide comments to ***Pearl River Basin, Mississippi Section 211 Feasibility Study - Integrated Draft Feasibility and Environmental Impact Statement***. The Parish has identified the subject study to be of high importance and requests that these comments and your response be placed into the administrative record for the proposed Environmental Impact Study (EIS) as required under the National Environmental Policy Act (NEPA). Detailed review comments follow in the attached document.

St. Tammany Parish Council has strongly objected by Resolutions (2008, 2013 and 2018) to the locally preferred Alternative C, commonly referred to as the "One Lake" Plan. St. Tammany Parish Council, Administration and its Engineering staff are concerned with consequences from loss of volume and velocity during critical low-flow conditions associated with the additional proposed impoundment in the Pearl River headwaters. The Parish believes that the Ross-Barnett Reservoir discharges are insufficient since the Reservoir reached its "full pool" in 1965. An additional impoundment with inevitable evaporation will further exacerbate existing water quantity

September 6, 2018

RE: Pearl River Basin, Mississippi Section 211 Feasibility Study

Page 2

and quality issues throughout the Pearl River Basin. The current development as proposed in the *Pearl River Basin, Mississippi Section 211 Feasibility Study - Integrated Draft Feasibility and Environmental Impact Statement* will introduce significant risks to this vulnerable National Treasure, such that it is indefensible and unjustifiable.

The Parish welcomes further review and dialogue with the Vicksburg District, U.S. Army Corps of Engineers and Rankin Hinds Pearl River Flood & Drainage Control District in light of the significant impact the proposed development may have on the lower Pearl River Basin, which is located in St. Tammany Parish.

We appreciate your review and consideration of this request.

Sincerely,



Patricia P. Brister
Parish President
St. Tammany Parish Government

cc: Ms. Gina Campo, Chief Administrative Officer, St. Tammany Parish
Ms. Erin Stair-Bivona, Assistant Director Development, St. Tammany Parish
Dr. E. deEtte Smythe, Ph.D., Regulatory Manager, St. Tammany Parish
Mrs. S. Michelle Blanchard, Parish Council District #13
Mr. Gene Bellisario, Parish Council District #9
Mr. Jerry Binder, Parish Council District #12
Mr. T.J. Smith, Parish Council District #14
Mr. Greg Cromer, Mayor, City of Slidell
Mr. David McQueen, Mayor, Pearl River

Enclosure

St Tammany Parish comments on the *Pearl River Basin, Mississippi Section 211 Feasibility Study - Integrated Draft Feasibility and Environmental Impact Statement*

St. Tammany Parish is providing items that we believe should be included in the soon to be released document, *Pearl River Basin, Mississippi Section 211 Feasibility Study - Integrated Draft Feasibility and Environmental Impact Statement*. Recommendations are made on 1) technical inadequacies, 2) types of analyses that should be provided, 3) expanding the modeling domain/impact area and 4) necessary clarifications based on review of the public meeting notes and draft Feasibility & EIS Report (6/2018).

The four conceptual alternatives presented in the draft Study are listed below, with the alternative preferred by the Rankin Hinds Pearl River Flood & Drainage Control District being the “Levees with Lake”:

- No Action
- Non-Structural Measures (elevations & relocations)
- Structural Measures/Levees and Floodwalls
- Lake Development – Excavate inside and outside of River channel (Locally Preferred Alternative C)

Overview of the Preferred Alternative C: Lake Development

The locally preferred alternative (per the EIS) consists of a 1900 surface acre impoundment with a weir forming a dam at the lower end. The Pearl River will be widened from about 300 feet to between 1,000 and 2,000 feet. Dredge spoil from the widening will be deposited around the proposed lake’s perimeter, presumably to elevate the land. All spoil is proposed to be deposited within 1,000 feet of the centerline of the River, much of which is currently wetlands. There will be habitat impacts for two species that are indigenous to the Pearl River and are protected by the Endangered Species Act.

St. Tammany Parish objects to the Alternative C “Lake Development” and the “Levees and Floodwalls” options due to the hydrologic changes and impacts from each. Development in the form of levees and impoundments in the Pearl River Watershed upstream of St. Tammany Parish could have significant adverse impacts on a wide range of concerns, including:

- Water Quantity & Quality
- Business & Industrial Activity
- Population Growth
- Recreation Resources
- Groundwater & Salt Water Intrusion
- Threatened & Endangered Species
- Aquatic & Wildlife Resources
- Community Cohesion, Cultural & Socioeconomic Resources
- Recreational & Commercial Fisheries

The underlined subjects are discussed in more detail, below.

Water Quantity

Throughout this discussion, the concept of “low-flow” and “high flow” will be discussed. There are multiple ways to present these concepts for stream baseflow:

- The 7Q10 is the minimum low-flow for seven (7) consecutive days in 10 years (established by USGS for a specific period of record).
- The 5th percentile is the minimum stream baseflow used by EPA and MSDEQ to establish permits when the 7Q10 is not available.
- The 10th percentile minimum stream baseflow used by many hydrologists as a surrogate for “critical low flow”.

In summary, $7Q10 < 5^{\text{th}} \text{ percentile} < 10^{\text{th}} \text{ percentile}$; thus, the most conservative of the low-flow surrogates, 10th percentile, will be utilized throughout the discussion below. For high-flow, the 90th percentile will be used for comparisons of pre- versus post- construction of the Ross Barnett (RB) Reservoir.

The period of record is also critical to any pre- vs post- RB comparison. St. Tammany considers the correct period-of-record for comparisons to be pre-Ross Barnett (1938-1960) and post-Ross Barnett (1965-present). Figure 1 is a map of the Pearl River Basin indicating areas of concern and providing analyses at these locations.

USGS 02486000 (Pearl River at Jackson, MS)

Construction of the Ross Barnett Reservoir (RB) began in 1960 and was completed in 1963. The 33,000 surface acre lake reached “full-pool” capacity in 1965¹. Following construction of the Ross Barnett Reservoir near Jackson, MS, Minimum Mean Daily Discharges have remained approximately the same, from 45 cfs (10/5/1956) to 47 cfs (6/14/1984) for pre-RB versus post-RB, respectively (Figure 2).

Extreme low-flows at Jackson were approximated using historic Minimum Mean Daily Discharge by Month at the gage USGS 02486000 Pearl River at Jackson, MS for the post-RB period of record (1965-2018). Minimum Mean Daily Discharges by month indicate flows will not meet the minimum 227 cfs required for Savannah St. WWTP, except during high-flow events in February and March (Table 1).

Comparing Average Monthly Discharges for the Pre- and Post-RB periods of record, it can be seen that during the low-flow months, May – November, flows from the RB Reservoir were fairly homogenous and somewhat higher than pre-RB. However, during the critically low- flow months of July and August, flows from the Ross Barnett are lower post- than pre-RB (Table 2). Average Monthly Discharge values are not detailed enough to quantify the low-flow incidences that may cause significant harm to the downstream NPDES permittees and the environment.

¹ Engineer provided date of Ross Barnett “full pool” for the Rankin-Hinds Pearl River Flood and Drainage Control District during a public meeting held in Slidell, LA on 8/16/2018.

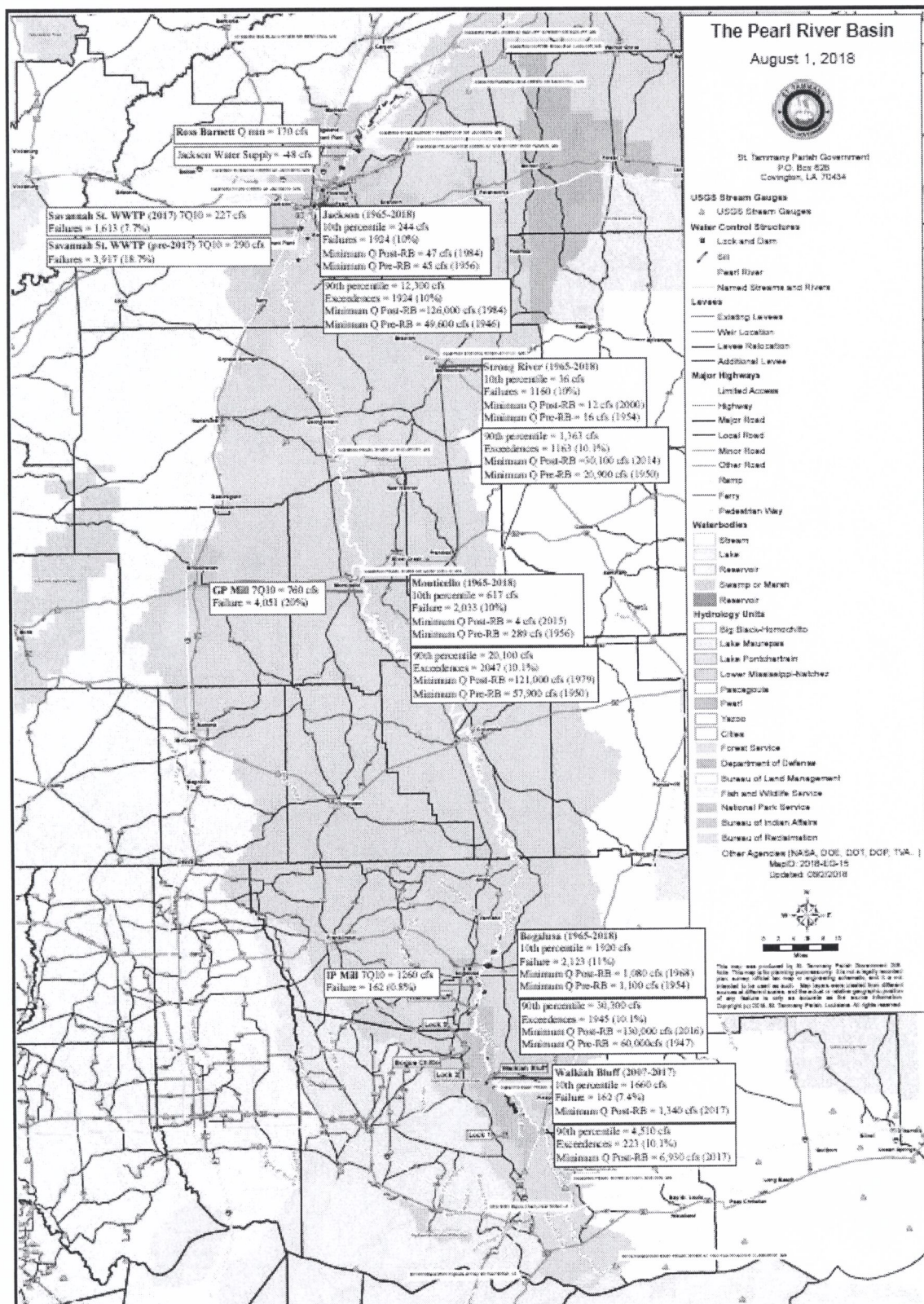


Figure 1. Pearl River Basin Locations of Concern

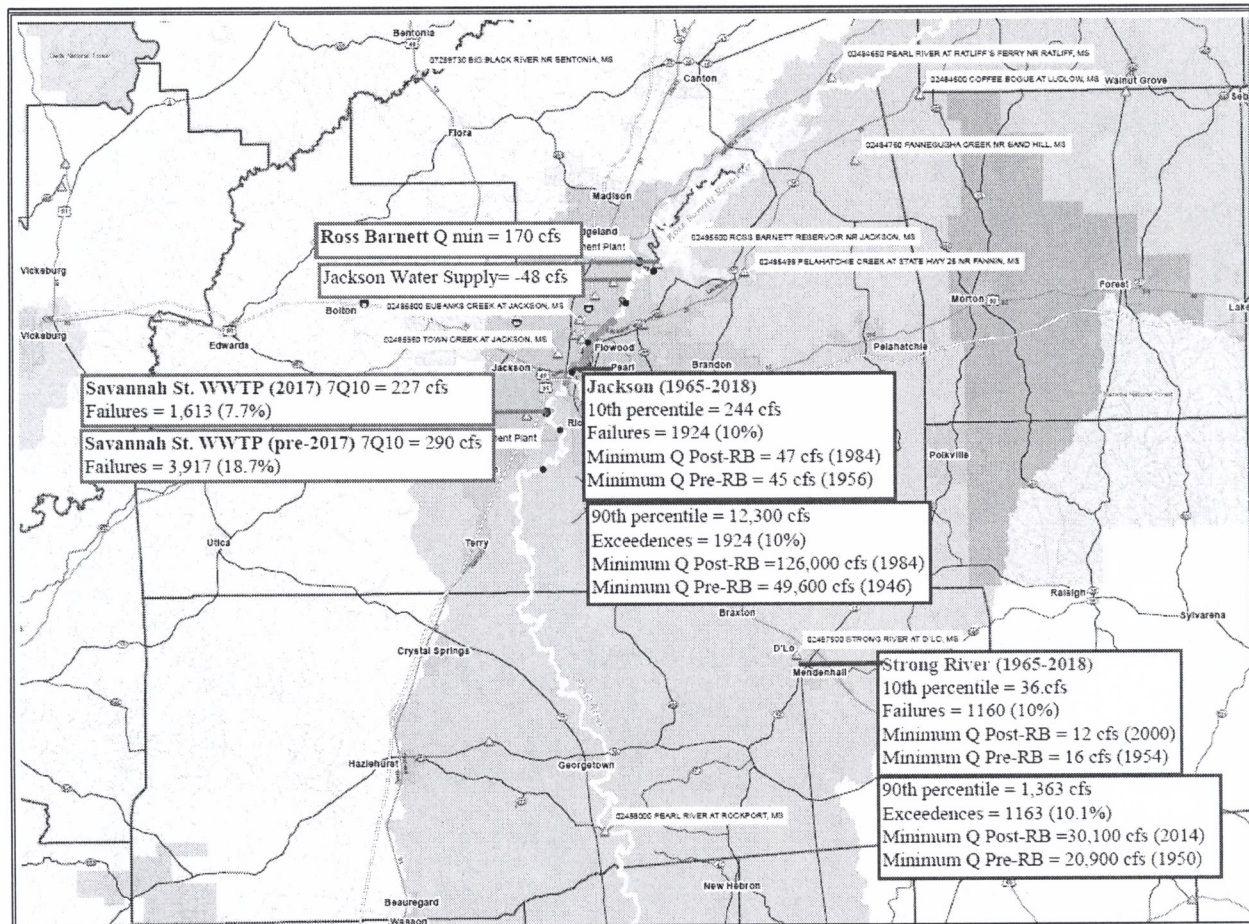


Figure 2. Pearl River Reach near Proposed Alt. C Impoundment with Flow Characteristics

**Table 1. Minimum Mean Daily Flows by Month for
USGS 02486000 Pearl River at Jackson, MS**

USGS 02486000 Pearl River at Jackson, MS Minimum Mean Daily Discharges by Month (1968-2018)		
Month	Pre-RB (1938-1960)	Post-RB (1965-2018)
	Minimum Discharge, cfs	Minimum Discharge, cfs
January	276	218
February	590	298
March	806	262
April	707	213
May	350	192
June	270	47
July	151	92
August	103	91
September	79	88
October	45	100
November	85	92
December	131	154
Months in which flows Post-TB < Pre-RB		

**Table 2. Average Monthly Discharges by Month for
USGS 02486000 Pearl River at Jackson, MS**

USGS 02486000 Pearl River at Jackson, MS Average Monthly Discharges (1968-2018)		
Month	Pre-RB (1938-1960)	Post-RB (1965-2018)
	Average Monthly Discharge, cfs	Average Monthly Discharge, cfs
January	5,757	7,643
February	9,488	9,208
March	8,725	9,015
April	7,719	8,610
May	1,715	4,153
June	1,640	1,713
July	1,819	1,124
August	1,028	956
September	507	1,124
October	461	1,252
November	1,128	2,000
December	2,588	5,013
Months in which stream baseflows < 227 cfs required for Savannah St. WWTP permit		

A 7Q10 of 227 cfs is the minimum stream baseflow measured on the USGS gage at Jackson required by MSDEQ for the most recent permit renewal (2017) for the 46 MGD City of Jackson Savannah St. WWTP discharge. Post-RB, there were 1,613 failures (7.7%) to meet this minimum flowrate (Figure 1). Mean Daily Discharge on the gage at Jackson show many measurements that are lower than the required 227 cfs for City of Jackson, Savannah St. Wastewater Treatment Plant (WWTP), as seen on the hydrograph in Figure 3.

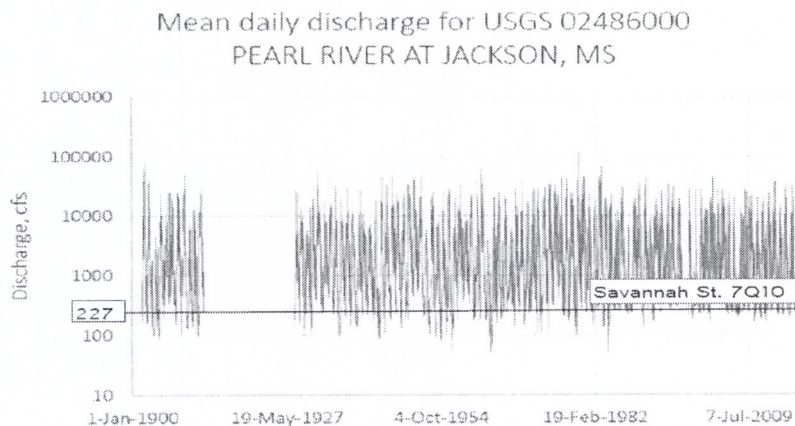


Figure 3. Mean Daily Discharge for USGS 02486000 (Pearl River at Jackson, MS) for the period of record

The previous NPDES permit for the Savannah St. WWTP set the stream baseflow at 290 cfs for which there were 3,917 failures (18.7%). It seems counter intuitive that the permit should have been issued with a lower stream baseflow, with the River's history of not attaining adequate flow. A TMDL for Nutrients² was implemented by EPA and MSDEQ in 2015 for the Pearl River from Ross Barnett to the Strong River. It seems plausible that inadequate stream baseflow at the Jackson gage during summer-critical conditions may be contributing to the lack of assimilative capacity at this location in the River incurring the TMDL.

The EIS authors stated in a public meeting that Richland Creek discharges into the Pearl River between the USGS gage 02486000 Pearl River at Jackson, MS and the Savannah St. WW TP discharge, contributing to the stream baseflow (Figure 1) that would augment the facility's permit requirements.

- Richland Creek has a 7Q10 of 0.9 cfs³, which is inadequate for substantive flow augmentation for the WWTP (USGS 1991).

² Total Maximum Daily Load Total Nitrogen and Total Phosphorous for the Pearl River from Ross Barnett Reservoir to the Strong River (Hinds, Rankin, Simpson and Copiah Counties) Pearl River Basin. MSDEQ. MSDEQ, Office of Pollution Control, Modeling and TMDL Branch. 2015.

³ USGS. 1991. *Low-Flow and Flow-Duration Characteristics of Mississippi Streams*. USGS Water Resources Investigations Report 90-4087. Table 2. Low-Flow characteristics for partial-record stations. Page 153.

Another approach to quantify low-flow is to use a 10th percentile comparison. Pre-RB 10th percentile stream baseflow at the Jackson gage was 192 cfs with 828 gage measurements (10%) failing to reach that flow rate. Post-RB 10th percentile stream baseflow is 244 cfs, but with a larger number of measurements <10th percentile (1,924) failing to meet the flowrate.

Finally, using the 10th percentile approach and comparing pre- and post- RB for the USGS gage at Jackson, Table 3 quantifies the differences in pre- and post-RB. Many of the 10th percentile critical low-flows are lower post-RB and do not satisfy the minimum stream baseflow required for the Savannah St. WWTP 7Q10. It is apparent that flow control at the RB Reservoir is making the stream baseflow lower at least during July and August, summer-critical months for NPDES dischargers, water quality, habitat, recreation, navigation and coastal interests.

- It is strongly suggested that the Ross Barnett Reservoir minimum discharges be increased.

Table 3. 10th Percentile Monthly Mean Daily Flows for USGS 02486000 Pearl River at Jackson, MS

Monthly Mean Daily Flows		
Gage Data USGS 02486000 Pearl River @ Jackson, MS		
Month	Pre- Ross Barnett (1938-1960)	Post- Ross Barnett (1965-2018)
	10th percentile Monthly Average Discharge, cfs	10th percentile Monthly Average Discharge, cfs
January	955	781
February	1960	1625
March	2763	1711
April	1870	232
May	588	274
June	350	239
July	238	232
August	222	214
September	141	212
October	99	206
November	123	223
December	205	293
Values are <227 cfs required by MSDEQ to satisfy Savannah St WWTP (2017)		
[1] Evap losses, EIS Appendix C, Table 5-1, pg 10.		

USGS 02488500 (Pearl River at Monticello, MS)

Monticello, MS is the location of a large NPDES discharger, Georgia Pacific (GP) Paper Mill (Figure 4). The 10th percentile flow post-RB is 512 cfs measured at the gage USGS 02488500 Pearl River at Monticello, MS, of which there were 854 measurements that failed to meet the 10th percentile (11%). The historic minimum flow at that location is 4.02 cfs. Residents along the River relay stories that the water was so low at that time that one could walk across to the other bank.

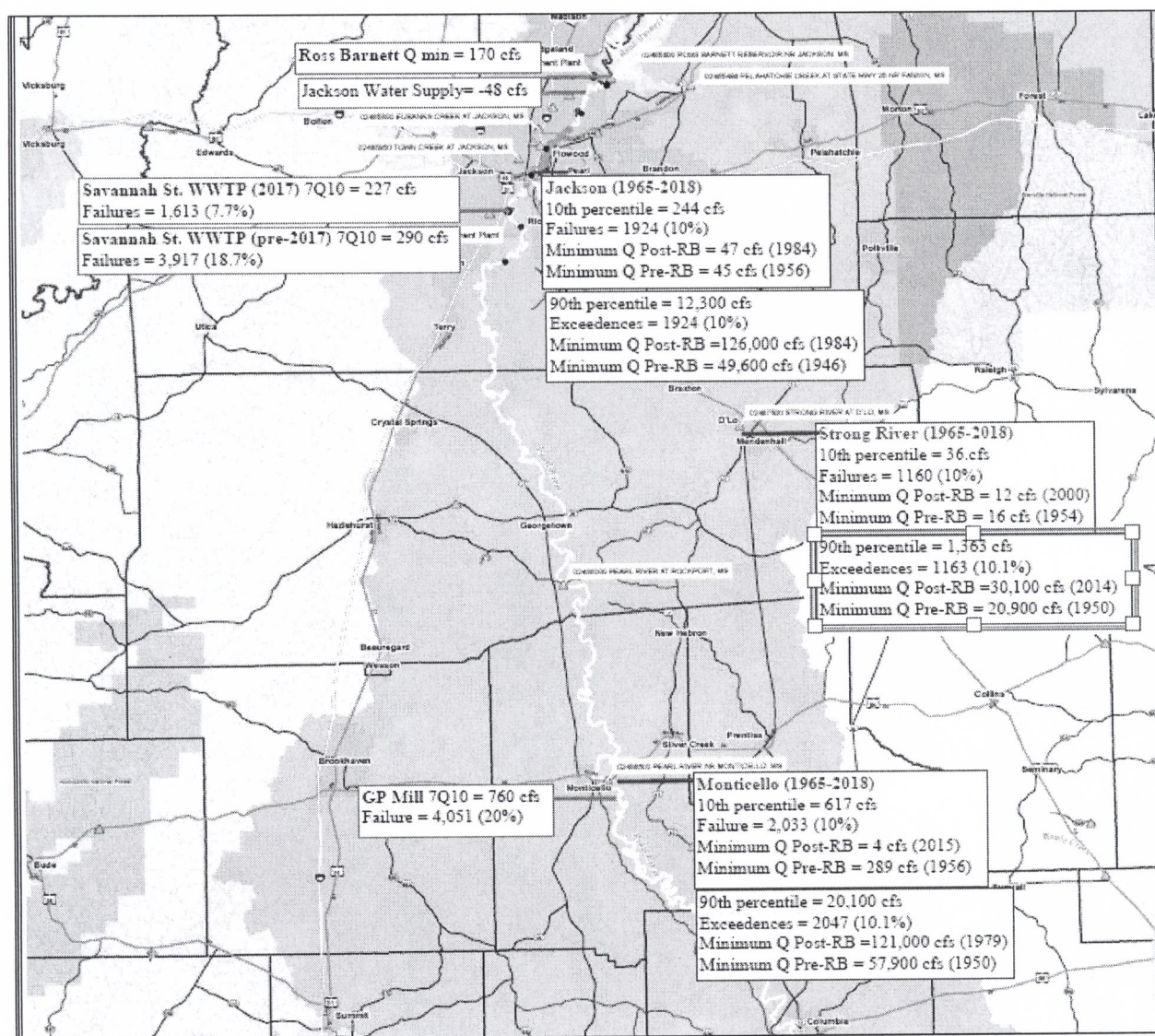


Figure 4. Pearl River Reach near Monticello, MS with Flow Characteristics

The 7Q10 for the 26.04 MGD (40.3 cfs) GP facility requires a stream baseflow of 760 cfs. There were 4,051 Daily Mean Discharge measurements (20%) that failed to meet that minimum. The Strong River, upstream of the Monticello gage, augments flow at this location (Figure 1); however, the post-RB 10th percentile for the Strong is 36 cfs measured at USGS 02487500 Strong River at D'Lo, MS. 1,160 Daily Mean Discharges failed to meet the 10th percentile (10%). The historic minimum was 12 cfs (8/31/2000).

- Clearly, stream baseflow, even with augmentation from the Strong River, is inadequate to meet the permit needs for this facility.

USGS 02489500 (Pearl River at Bogalusa, LA)

Bogalusa, LA is the location of a large NPDES discharger, International Paper (IP) Mill (Figure 5). The 10th percentile flow post-RB is 1,920 cfs, of which there were 2123 Daily Mean Discharges that failed to meet the 10th percentile (11%). The historic post-RB minimum flow at that location is 1,080 cfs. The 7Q10 for the 16 MGD (24.8 cfs) IP facility requires a stream baseflow of 1,260 cfs. There were 162 post-RB Daily Average Discharge measurements (0.8%) that failed to meet that minimum. While the minimum stream baseflow for this facility was well determined for the permit, there is little margin of safety in the stream baseflow, potentially incurring in-stream water quality violations during summer-critical conditions.

- There is a need for additional stream baseflow augmentation at this location in the Pearl River.

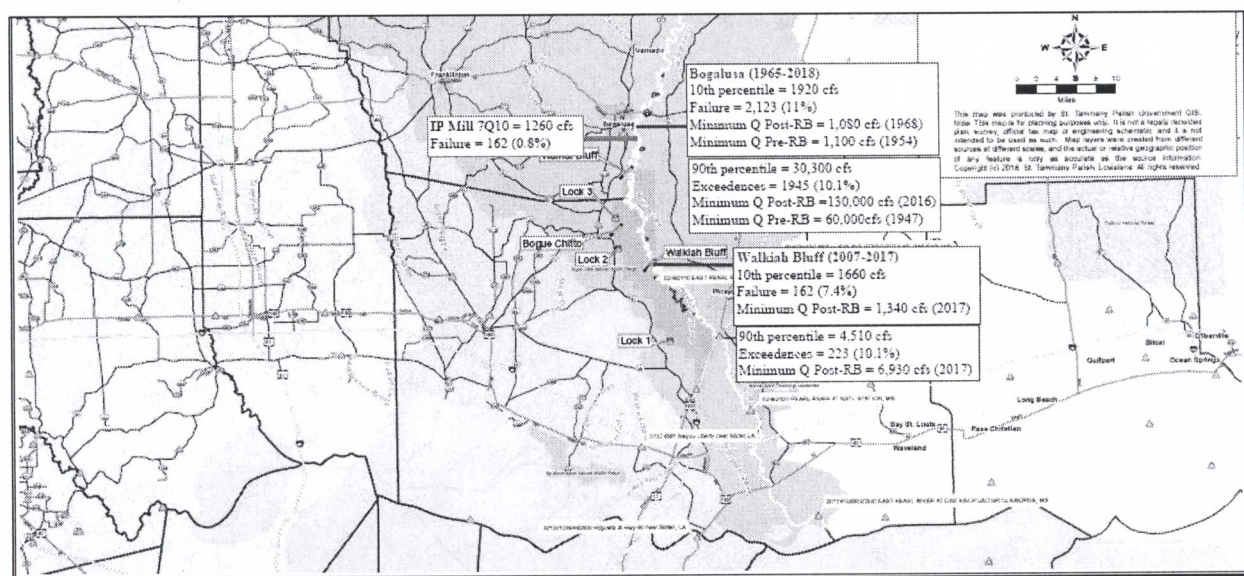


Figure 5. Pearl River Reach near Bogalusa, LA with Flow Characteristics

USGS 2492110 (East Pearl River ab Wilson Slough at Walkiah Bluff)

This site is of particular interest to oyster culture in coastal MS and LA (Figure 5). Adequate freshwater during summer critical conditions is necessary to mitigate the effects of saltwater intrusion and survivability of oysters in Lake Pontchartrain and the Mississippi Sound. Walkiah Bluff was constructed by the USACE to divert freshwater to the East Peal River during low-flow conditions. The 10th percentile Daily Mean Discharge measured at this gage is 1,660 cfs, of which 162 measurements <10th percentile (2007-2018). The historic minimum flow was 1,340 cfs (10/15/2007). A significant amount of debris is reportedly blocking the structure's weir lessening the amount of fresh water being diverted.

- It is suggested that the USACE conduct maintenance on the Walkiah Bluff structure to restore its capacity.

Combined Impacts of Additional Impoundment with an Already Dammed Pearl River

Even without the addition of the proposed impoundment in Alt. C, it can be summarized that the Ross Barnett Reservoir has changed the flow patterns and Daily Mean Discharges throughout the Pearl River Watershed (Table 4). 10th percentile discharges are lowered in low-flow, summer-critical conditions and are increased during 90th percentile high-flow events. The latter will be discussed in another section.

Table 4. Select USGS Gages in Pearl River Basin, Low Flow Summary

USGS Gage Number	Description	7Q10, cfs	LOW-FLOW							
			PRE-Ross Barnett (1938--1960)				POST-Ross Barnett (1965-2018)			
			10th Percentile, cfs	Number Events ≤10th Percentile % Events ≤10th Percentile	Minimum Discharge, cfs	Date	10th Percentile, cfs	Number Events ≤10th Percentile % Events ≤10th Percentile	Minimum Discharge, cfs	Date
2485601	Pearl River @ Ross Barnett Reservoir	170 (post-1965)	-	-	-	-	-	-	-	-
2486000	Pearl River @ Jackson, MS	103 (1939-1960)	192	828 10.1 %	45	10/5/1956	244	1,924 10.0 %	47	6/14/1984
2486300	Richland Creek nr Jackson, MS	0.9	-	-	-	-	-	-	-	-
2487500	Strong River at D'Lo, MS	19 (1929-1970)	32	850 10.1 %	16	9/2/1954	36	1,160 10 %	12	8/31/2000
2488500	Pearl River @ Monticello, MS	359 (1939-1960)	512	854 11 %	289	9/28/1956	617	2,033 10 %	4	10/18/2015
2489500	Pearl River near Bogaulsa, LA	1,400 (1939-1960)	1,620	827 10.20 %	1,100	9/15/1954	1,920	2,123 11.0 %	1,080	10/26/1968
2492110	East Pearl River ab Wilson Slough @ Walkiah Bluff	(2007-2017)	-	-	-	-	1,660	162 7.40 %	1,340	10/15/2007

The EIS proposes to create an additional impoundment approximately 7.5 miles downstream of the Ross Barnett Reservoir. The EIS authors have provided the Monthly Mean Discharges for the Pearl River at Jackson for the entire period of record (Figure 3). Because the RB is essentially the new headwater for this reach of the Pearl River, beginning in 1965 when it reached “full pool”, St. Tammany Parish objects to the use of pre-RB data in determining flow impacts from the proposed impoundment. St. Tammany provided the Monthly Mean Discharges by Month for the Jackson gage pre- and post-RB previously in Table 2.

- Monthly Mean Discharges should be calculated using ONLY post-RB data when determining flow impacts from the proposed impoundment.

Evaporative Losses

The EIS authors calculated evaporative losses from the proposed 1900 surface acre.

- Evaporative losses subtracted from either the Minimum Daily Mean Discharges by Month (Figure 6) or the 10th percentile of Mean Daily Discharges (Table 5) indicate the already-impacted Pearl River will be further compromised.

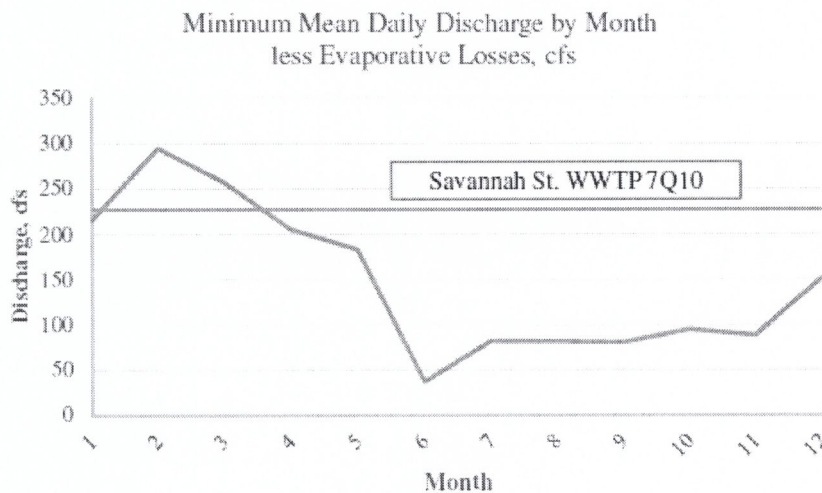


Figure 6. Minimum Mean Daily Flows by Month minus proposed evaporative losses

Seepage Losses

Seepage losses/gains in the proposed impoundment were not addressed in the EIS. Losses would require an increased minimum discharge from the Ross Barnett Reservoir in order to maintain adequate downstream flows during low-flow events.

- A geotechnical investigation is needed in order to determine whether there will be gains or losses in the proposed impoundment due to groundwater effects.

Table 5. 10th Percentile of Mean Daily Discharges for USGS 02486000 Pearl River at Jackson, MS

Monthly Mean Daily Discharges				
Gage Data USGS 02486000 Pearl River @ Jackson, MS				
Month	Pre- Ross Barnett (1938-1960)	Post-Ross Barnett (1965-2018)		
	10th percentile Monthly Average Discharge, cfs	10th percentile Monthly Average Discharge, cfs	Evap. loss, cfs [1]	10th percentile Monthly Average Discharge less Proposed Evap. loss, cfs
January	955	781	2.5	779
February	1960	1625	3.4	1622
March	2763	1711	5.3	1706
April	1870	232	7.7	224
May	588	274	9.2	265
June	350	239	10.1	229
July	238	232	9.9	222
August	222	214	9.1	205
September	141	212	7.5	205
October	99	206	5.2	201
November	123	223	3.6	219
December	205	293	2.6	291
[1] Evap losses, EIS Appendix C, Table 5-1, pg 10.				
Values are <227 cfs required by MSDEQ to satisfy Savannah St WWTP (2017)				

High Flow Impacts from the Combined Impoundments (Ross Barnett & Alt. C)

The current proposal, Alt. C in the *Pearl River Basin, Mississippi Section 211 Feasibility Study – Integrated Draft Feasibility and Environmental Impact Statement*, is expected to demonstrate a reduction of flooding in the Jackson, MS area due to lowering the tailwater condition, thereby speeding up flows. This increase in flow due to loss of floodplain storage needs to be mitigated by a volume of storage created downstream, which is proposed Alt. C impoundment.

In Louisiana, both flood height and duration cause issues on a yearly basis during high flow events. Further, at all Pearl River gage stations and tributaries assessed, the 90th percentile discharges increased post-Ross Barnett, as did the maximum flows (Table 5). Table 5 also provides insight as to how many Daily Mean Discharges were greater than the 90th percentile; in most cases this was in excess of 10%.

These “slugs” of water from Ross Barnett cause bank erosion and excessive sediment transport to downstream reaches. St. Tammany Parish is concerned with how the proposed impoundment will compensate for the “slugs” from the Ross Barnett.

- An unsteady model showing both maximum flooding and duration of flooding needs to be run for all conceptual alternatives over the entire model domain (Ross Barnett Reservoir to Lake Pontchartrain and the Mississippi Sound).
- As with low-flow considerations, the high-flow operational plan must be detailed in the EIS.
- Sediment transport should be included in the modeling effort in the EIS.

Table 4. Select USGS Gages in Pearl River Basin, High Flow Summary

USGS Gage Number	Description	HIGH-FLOW							
		PRE-Ross Barnett (1938--1960)				POST-Ross Barnett (1965-2018)			
		90th Percentile, cfs	Number Events ≤ 90 th Percentile % Events ≤ 90 th Percentile	Maximum Discharge, cfs	Date	90th Percentile, cfs	Number Events ≤ 90 th Percentile % Events ≤ 10 th Percentile	Maximum Discharge, cfs	Date
2485601	Pearl River @ Ross Barnett Reservoir	-	-	-	-	-	-	-	-
2486000	Pearl River @ Jackson, MS	10,300	833 10.1 %	49,600	2/17/1944	12,300	1924 10 %	126,000	4/17/1979
2486300	Richland Creek nr Jackson, MS	-	-	-	-	-	-	-	-
2487500	Strong River at D'Lo, MS	1,500	844 10 %	20,900	1/7/1950	1,363	1163 10.1 %	30,100	4/8/2014
2488500	Pearl River @ Monticello, MS	17,700	782 10.1 %	57,900	1/7/1950	20,100	2047 10.1 %	121,000	4/20/1979
2489500	Pearl River near Bogalusa, LA	23,700	1390 17.1 %	60,000	1/26/1947	30,300	1945 10.0 %	130,000	3/12/2016
2492110	East Pearl River ab Wilson Slough @ Walkiah Bluff	-	- -	-	-	4,510	223 10.1 %	6,930	8/4/2017

Summary Water Quantity Comments

In summary, the headwater flow from the Ross Barnett Reservoir minimum discharge (170 cfs), less the withdrawal for the City of Jackson Water Supply (-48 cfs) and adding the minimal input from tributaries in the project area (most of which have 7Q10 = 0 cfs) is reflected in the USGS stream gage at Jackson. The Jackson gage reflects that for much of the year, flow is inadequate to provide the minimal stream baseflow required for the Savannah St, WWTP (227 cfs) during summer critical conditions. Further, the lack of adequate flow may have contributed to the water quality impairments and promulgated TMDL in the area, due to lack of assimilative capacity. The location of the proposed additional impoundment is critical for flow management. Additional stream baseflow is required even without the additional losses incurred by Alt. C.

- It is suggested that the Ross Barnett Reservoir should be encouraged to discharge a minimum flow > 170 cfs required by the MS Board of Commissioners in 1956.

- A minimum flow release must be specified in the EIS and included in the reservoir operational plan for Alt. C.
- In the operational plan, the tandem operations of the two gates from the respective reservoirs must be detailed.
- The minimum flows from both reservoirs should be formalized through an MOU between Ross Barnett and proposed Alt. C impoundment for flow management and with the States of Mississippi and Louisiana.

Water Quality

Currently the Pearl River and its distributaries are suffering from inadequate low flow that is impacting water quality (from reduced assimilative capacity), discharge limits for effluent dischargers (such as International Paper), recreation (due to shallow draft limitations), fish populations (due to low dissolved oxygen concentrations), aesthetics (impacting swamp tours in St. Tammany Parish), and saltwater intrusion (affecting drinking water wells, habitat, and coastal marshes) in the lower portion of the Pearl River.

Significant environmental impacts exist that are partially attributable to the Ross Barnett Reservoir discharging inadequate volumes during low flow months. Without adequate flow from Jackson, the assimilative capacity of the Pearl River will continue to be compromised and the River subsegments will remain impaired. In fact, EPA has promulgated 21 Total Maximum Daily Loads (TMDL) for subsegments of the Pearl River in Louisiana and 49 in Mississippi for various pollutants. Failure to improve the water quality in these stream segments may result in a reduction of development in the watershed, due to permit denials.

A number of TMDLs have been promulgated for the Alt. C reach of the Pearl River (Figure 7). The 2015 EPA Nutrient TMDL⁴ (Ross Barnett to the Strong River) is a major concern to all downstream stakeholders. The Pearl River in that extensive reach is impaired for low dissolved oxygen (DO) due to nutrients from NPDES dischargers and from nonpoint sources (NPS) from nine (9) Multiple Separate Storm Sewer System (MS4) communities in the project area. The TMDL calls for a 70% reduction in Total Phosphorous, much of which must be from reductions in NPS loading from the nine (9) MS4s.

These tributaries are a major source of pollutants into the Pearl during rainfall events and will discharge into the proposed impoundment. Without significant water quality improvements from aggressive MS4 and Ross Barnett activities, the water quality in the proposed impoundment will certainly be eutrophic, incur algae blooms and dissolved oxygen collapse, and potentially exceed CWA standards.

- Discharges from the proposed Alt. C impoundment will compromise the downstream reaches even more than the Ross Barnett currently does.

⁴ *Total Maximum Daily Load for Total Nitrogen and Total Phosphorous for the Pearl River from Ross Barnett Reservoir to the Strong River, Hinds, Rankin, Simpson, and Copiah Counties, Pearl River Basin.* Prepared by MDEQ, Office of Pollution Control, Modeling and TMDL Branch. April 2015.

Table 3.1. Summary of TMDLs for waterbodies within the Study Area.

Waterbody	TMDL Pollutant	TMDL Approved	Recommended Reduction
Hanging Moss Creek	Total Biochemical Oxygen Demand	June 2009	43.9% reduction of total phosphorus
	Total Nitrogen		
	Total Phosphorus		
Pearl River	Total Nitrogen	June 2009	56.0% reduction of total phosphorus
	Total Phosphorus		
	DDT	January 2007	-
	Toxaphene		
Hanging Moss Creek Pearl River Richland Creek	Sediment	March 2009	-
Richland Creek	Total Biochemical Oxygen Demand	December 2008	49.8% reduction of total phosphorus
	Total Nitrogen		
	Total Phosphorus		
Pearl River from Ross Barnett Reservoir to the Strong River	Total Nitrogen	April 2015	70% reduction of total phosphorus
	Total Phosphorus		

Figure 7. EIS Table 3.1 presenting TMDLs in the Study Area

The West Pearl River in St. Tammany Parish already experiences many environmental consequences resulting from reduced flow being released from the Ross Barnett, specifically: Quiescence, water quality degradation, eutrophication and invasive aquatic macrophytes, shoaling, navigation impediments, saltwater intrusion into the River and shallow drinking water wells, loss of habitat, loss of commercial fisheries and risk from wasteload allocation (WLA) excursions from the International Paper (IP) Mill⁵ in Bogalusa.

- As discussed previously, all vulnerabilities result from lack of volume and reduced velocity from the headwaters during critical low-flow months. Thus, any additional headwater reductions are environmentally unacceptable.

⁵ Permit limits for the IP Mill were determined from the LDEQ modeling effort published 12/03/2013. Results of the *Final - Evaluation of Biochemical Oxygen Demand Loading from the International Paper – Bogalusa Paperboard Mill (AI# 38936, LPDES# LA0007901) into the Pearl River (Subsegments 090101 & 090107)* were utilized to verify permit limits for the discharger.

Sediment Loading downstream of the proposed impoundment

It was pointed out during a public meeting by a resident in Slidell, LA that the shape of the proposed weir is stated to reduce maintenance; presumably, this will reduce dredging needs in the proposed impoundment. The resident was concerned that the 12'x12' gates would be opened to release slugs of sediment that will travel downstream. Some sediment is necessary to maintain bank stability, but an excess will add to the over-burdened lower Pearl River.

- St. Tammany Parish would like the EIS to include a discussion of the maintenance procedures to maintain Alt. C storage capacity and to minimize downstream sediment loading.

Stakeholders are assured in the EIS that since 96% of the water into the proposed impoundment will be from the Ross Barnett Reservoir, water quality in the proposed lake will be similar to that in Ross Barnett Reservoir (EIS Appendix D, Environmental, pg.135):

Most of the water entering the project reach originates upstream of the Ross Barnett Reservoir. The reservoir functions as a settling basin for the downstream study reach. Water quality of the reservoir is a good indicator of water quality in the proposed impoundment.

However, the water quality of the RB was determined to be impaired for nutrients and temperature. Following the draft TMDL for Nutrients (MSDEQ 2009), a Water Quality Management Plan was developed for the Ross Barnett Reservoir (EIS Appendix D, Water Quality, Pg.11):

The water quality of the Ross Barnett Reservoir will have a significant influence on the water quality within the proposed project. In 2011, MDEQ in conjunction with the Pearl River Valley Water Supply District developed a *Comprehensive Protection & Restoration Plan for the Ross Barnett Reservoir Watershed, Mississippi*. This plan serves, "as the framework for long-term, coordinated multi agency efforts to protect and restore water quality in the Reservoir and its watershed."

The plan identified, within the Reservoir and its watershed, six priority issues along with management strategies for reducing and controlling them. Those issues include the following:

1. Sediments and turbid water,
2. Nutrient enrichment and algae growth,
3. Bacteria and other pathogens,
4. Invasive aquatic plant species,
5. Pesticides (currently used herbicides and insecticides), and
6. Trash dumping and littering in and around the Reservoir and its shoreline.

Further, this plan identifies areas where targeted watershed protection and restoration efforts will be focused. This plan identified the most prevalent pollutant source in the Reservoir and its tributaries to be nonpoint sources.

Water quality sampling was conducted by the EIS team in July 2014 (EIS Appendix D, Water Quality, pg.26) presumably to verify “current summer-critical conditions,” and/or to gauge the progress from the RB SW Management Plan (above). Sampling locations included two on the Pearl River (downstream of the Ross Barnett Reservoir, upstream of the Jackson water supply intakes) and at three of the tributaries that will discharge into the proposed impoundment. As seen in Figure 8 (EIS Appendix D, Water Quality, Pg.43), there were significant failures of DO criteria at two Pearl River sites (Ross Barnett and Jackson water supply), and failure of temperature standard at three Pearl River sites and one tributary that discharges into the proposed impoundment.

Table 3.15. Comparison of measurements from July 2014 water quality study with numeric criteria.

Parameters Measured with Criteria	Station	Number of Exceedances	Criterion not met	Percent of measurements
DO, instantaneous	PR1	4	4 mg/L	<1%
	PR2	6		1.3%
DO, day average	PR1	1	5 mg/L	7.7%
	PR2	2		18.2%
Temperature	PR1	2	90°F	<1%
	PR2	3		<1%
	PR3	3		<1%
	RT3	1		50%
pH	-	0	-	-
Conductivity	-	0	-	-
Ammonia	-	0	-	-

Figure 8. Sample Comparison to Water Quality Standards, July 2014

Further, water quality in the tributaries discharging into the proposed impoundment is dominated by NPS from the nine MS4s on those tribs. The EIS authors are certain that the 2011 Stormwater Master Plan enacted to improve water quality from the MS4s will provide relatively “clean” water to the impoundment. The TMDLs listed in Figure 5 indicate that one of the tribs. (Hanging Moss Creek) has its own TMDL for BOD, Nutrients and Sediment (2009).

The watershed of the proposed channel improvements within the Project Area, is primarily urban. Storm water runoff from localized storms impacts the water quality in the Pearl River. Implementation of the existing storm water management plans for adjacent and nearby municipalities should improve the quality of this runoff.

- The EIS must address whether WQ improvements have been achieved in the MS4s and the Ross Barnett discharges in the seven (7) years since the Stormwater Master Plan and TMDL were promulgated.
- Does the proposed impoundment have a plan to improve water quality prior to release?

Water Quality Modeling

The modeling effort utilized a 1-D, steady-state approach. While this may be effective when developing a “snapshot” of “worst case” conditions, as with a TMDL, it is not appropriate for average advective conditions where many tributaries and distributaries confluence in the main stem of the Pearl River. Further, the model domain only extends to River Mile 279 below Richland Creek. The EIS authors has made the statement in a public meeting and in the EIS that the Ross Barnett discharge rate contributes minimally to that of the mouth outfalls.

- St. Tammany Parish is concerned that with the known low-flow (and high-flow) concerns of downstream communities and NPDES dischargers, an unsteady-state model should be developed with its modeling domain extending to the Mouth of the West and East Pearl Rivers at Lake Pontchartrain and the MS Sound, respectively. This would provide a more accurate method of quantifying downstream flow impacts.

The geographic boundary of the hydraulic and hydrologic (H&H) model domain should include the Pearl River watershed from the Ross Barnett Reservoir to the Mississippi Sound and the Biloxi Marshes of Louisiana. Further, due to the dynamic system downstream, an unsteady model should be developed that will allow modeling of the entire impacted Pearl River system (Jackson to Lake Pontchartrain and Mississippi Sound).

- St. Tammany Parish requests that the Rankin Hinds Pearl River Flood & Drainage Control District produce a defensible, robust unsteady model of the current conditions and projections for all of the conceptual alternatives.

Using data from the July 2014 sampling event, the EIS team developed a model to predict the impact of the proposed impoundment. Figure 9 (EIS Appendix D, Water Quality, pg.119) presents model output of dissolved oxygen (DO) for two scenarios: 1) “No Action” (current conditions) and 2) Alternative C scenario. In the “No action” scenario, DO is significantly higher than the Alt. C scenario; however, EIS reviewers are assured that the DO in the Alt. C scenario will remain above the CWA criteria of 5.0 mg/L. Reviewers are asked to believe that the flow rates, pollutant concentrations, temperatures and decay coefficients used in the model are also correct. Assuming the 10th percentile flow rates were to be used, it is doubtful that the DO would maintain CWA DO minimums.

- St. Tammany Parish requests that a modeling scenario be conducted using “worse-case conditions” of 10th percentile flow rates and 32°C temperatures, with a minimum 20% increased loadings to represent a margin of safety for growth.

Further, DO appears to FAIL EPA anti-degradation criteria for dissolved oxygen (< 0.2 mg/L) with Alt. C impoundment. LDEQ’s water quality standards define degradation as “a lowering of water quality, as demonstrated by data analysis, water quality models, or other scientifically defensible method.” So, a lowering of the dissolved oxygen content, as predicted by a model, is considered degradation. Per LAC 33: IX, Chapter 15 (Water Quality Certification Procedures), LDEQ has the responsibility to certify that federal permits or licenses will not violate water quality standards, so the application of the antidegradation policy is not limited to industrial discharges.

- In reviewing the discharge from the proposed Alt. C impoundment, MSDEQ and USACE are encouraged to require compliance with the CWA anti-degradation standard upon submittal of the final EIS and again at the USACE permit application.

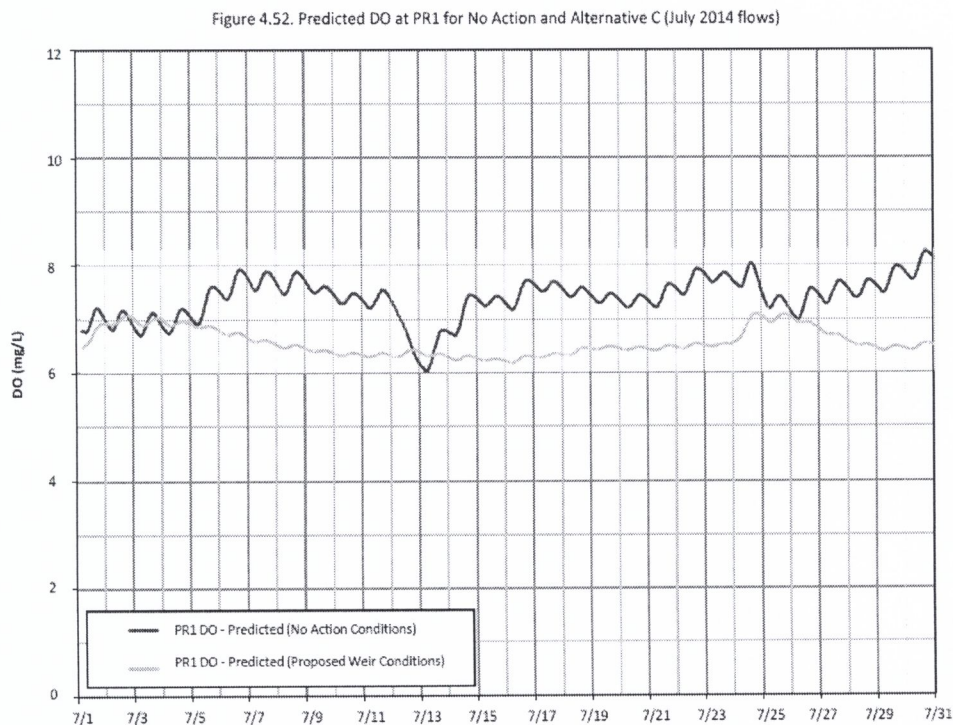


Figure 9. Predicted DO vs Observed DO at Sample Location downstream of the Ross Barnett gates

Future Major NPDES Dischargers in the Area

An additional new domestic wastewater treatment facility is forecast to be constructed across the Pearl River from the Savannah St. facility and downstream of the proposed Alt. C impoundment weir. The new facility is accounted for in the 2015 TMDL, but indicates that additional development is anticipated. Future growth is not discussed in the EIS or accounted for in the flows and loads in the model.

- Although additional wastewater is accommodated in the 2015 Nutrient TMDL (EPA 2015), it is recommend that a growth factor be included in the EIS model that includes additional stormwater runoff and water supply needs to assure that minimum flow needs and CWA standards are met.

Summary of Water Quality Concerns

In summary, documentation in the sampling events and the 2015 TMDL demonstrate that water quality from the Ross Barnett Reservoir is currently impaired with excess nutrients (eutrophic) and exceeds EPA Clean Water Act (CWA) criteria for temperature. The proposed additional lake will certainly exacerbate these environmental impacts unless the Alt. C inflows demonstrate considerable improvement.

- The Ross Barnett Reservoir operational plan should be modified to address its water quality issues and the MS4s should be compelled through regulatory audits to improve water quality from their respective stormwater outfalls.

As discussed previously, a minimum discharge from the Reservoir and the proposed lake is required to provide adequate stream baseflow in order to minimize environmental impacts.

- A minimum discharge must be determined from a large-scale modeling effort that satisfies stream baseflow necessary for downstream dischargers, public health, habitat and ecosystem needs. This minimum discharge from Ross Barnett and the proposed lake development should be specified in each operational plan and be strengthened by an MOU with the States of Mississippi and Louisiana.
- Further, St. Tammany Parish would like the Ross Barnett operations plan to be reviewed to see if stream baseflow could be augmented when needed to address the environmental impacts in Louisiana resulting from low flow events.

Business & Industrial Activity

Construction of the Ross Barnett Reservoir began in 1960 and was completed in 1963. The 33,000 surface acre lake reached “full-pool” capacity in 1965⁶. Following construction of the Ross Barnett Reservoir near Jackson, MS, historical low flow discharge rates measured at the USGS stream gauge Pearl River @ Bogalusa have decreased from 1100 cfs⁷ down to 1020 cfs⁸. It appears that the controlled discharges from the Ross Barnett Reservoir have contributed to the reduced historic low flows in the West Pearl River @ Bogalusa.

Regulatory compliance for the International Paper Mill on the Pearl River near Bogalusa, LA is dependent upon a minimum flow of 1260 cfs in the Pearl River measured at the stream gauge USGS 02489500 (Pearl River near Bogalusa, LA). During the August 2011 excursion (black liquor release), the critical low flow was an historic 1160 cfs. This reduction in flow (coupled with permit exceedances at the Mill, resulted in egregious environmental damage to approximately 60 river miles of the Lower Pearl River.

- A minimum flow release must be quantified in the EIS and included in the reservoir operational plan. Further, the minimum flow should be formalized through an MOU with the states of Mississippi and Louisiana.

Further, the additional 1900⁹ surface acre impoundment proposed by the Rankin Hinds Pearl River Flood & Drainage Control District may further reduce the flow by as much as 10.1 cfs (per the EIS) due to evaporative losses in the proposed impoundment.

⁶ Engineer provided date of Ross Barnett “full pool” for the Rankin-Hinds Pearl River Flood and Drainage Control District during a public meeting held in Slidell, LA on 8/16/2018.

⁷ 1100 cfs (daily mean discharge) for 9/15/1954 pre-construction.

⁸ 1020 cfs (daily mean discharge) 10/29/1963 post-construction.

⁹ Surface acreage of the proposed lake will be enlarged from the existing 300 ft. stream profile.

Population Growth

Apparently, the minimum flowrate for discharges released from the Ross Barnett Reservoir is based upon regulatory compliance to accommodate the Wasteload Allocation (WLA) for Jackson, MS Wastewater Treatment Plant (WWTP). Providing a growth factor with consequent discharge and load estimates assures that assimilative capacity and dissolved oxygen are preserved in the stream segments downstream of this discharger.

- The State of Mississippi should assure that a growth factor is built into this release.

Recreation Resources

Boating for recreation and navigation are currently compromised due to reduced flow & velocity during critical low-flow events. Inadequate stream baseflow effects increased siltation, debris accumulation and nuisance rooted macrophyte establishment.

- Minimum flow agreements between the two reservoirs, along with Best Management Practices throughout the highly erosional upper Pearl River watershed, will help reduce further sedimentation in the lower watershed.

Groundwater & Salt Water Intrusion

Private drinking water wells in STP were inventoried in 2011; there were determined to be 114 wells within ¼ mile of the West Pearl River in STP that are registered with Louisiana Department of Natural Resources; many of which are considered to be shallow (<75' deep). These shallow wells are extremely vulnerable to saltwater intrusion. With increased population pressure in the Pearl River Basin, the cone of depression will draw saltwater up into the wells. With less fresh water available, the number of well failures is expected to increase, impacting development and public health.

- Base flow augmentation in the Pearl River from the reservoirs should be studied to determine minimum stream baseflows needed to relieve salt water intrusion impacts in downstream drinking water wells and coastal marshes.

Since 2006, the Louisiana Coastal Protection and Restoration Authority (CPRA) and the US Geological Survey (USGS) have developed and maintained a Coastwide Reference Monitoring System (CRMS) for wetland restoration efforts. There are three CRMS sites in the vicinity of coastal Pearl River and a number of coastal restoration projects that are in the construction or engineering/development phase (Figure 10). These projects are vital to the restoration and resiliency of the Louisiana coastline and provide surge protection to inland communities.

The CRMS site houses monitoring datasets of hydrogeomorphological parameters that characterize coastal habitats in Louisiana. Some of the parameters that are monitored include water level, soil porewater salinity, percent organic content and surface elevation/accretion. The CRMS site link is: <http://www.lacoast.gov/crms2/Home.aspx>. All CRMS indicate increased saline concentration in porewater, perhaps attributable to less fresh water flowing down the Pearl River in low flow months.

- St. Tammany Parish recommends that monitoring at the CRMS sites continue, particularly to monitor for salt water intrusion.

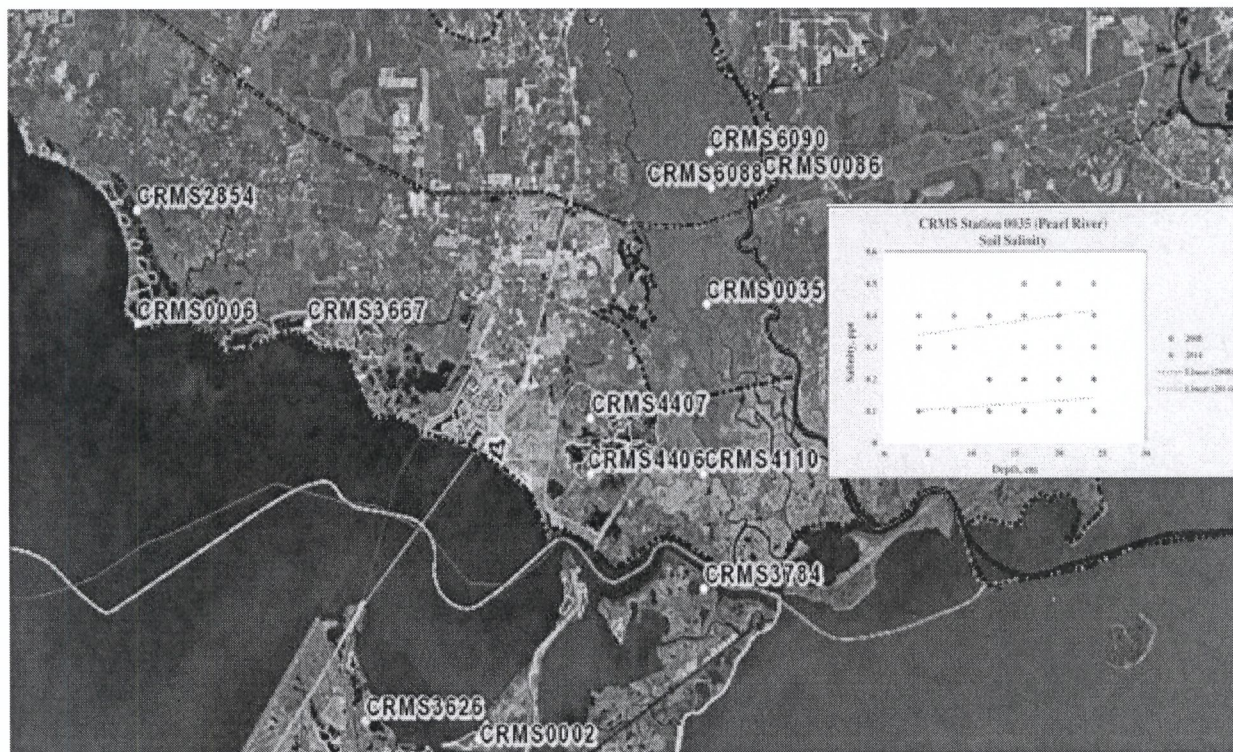


Figure 10. Locations of Coastal Restoration Projects and CRMS sites in the Pearl River vicinity

The Pearl River in Louisiana is considered to be a national treasure. It is designated by LDEQ as an Outstanding Natural Resource Water (ONRW) and by LDWF as a Scenic River and is subject to higher WQ standards. In 2013, the LDEQ conducted a 33.5 mile intensive survey and water modeling effort to test the proposed permit limits for the IP Mill in Bogalusa, LA. Dissolved oxygen (DO) was modeled for the Pearl River from the Mississippi state line, upstream of Bogalusa, LA (RKm 137), to just downstream of Walkiah Bluff, MS (RKm 84.3)¹⁰. Permit limits for the IP Mill outfalls were dependent upon a minimum Pearl River discharge of 1260 cfs at Bogalusa.

- Any reduction in Pearl River baseflow, particularly in low-flow events, is unacceptable. Advective flows provide reaeration that is critical to assimilation of pollutants from permitted dischargers to assure the health of the River and the ecosystem.

¹⁰ Final – Evaluation of Biochemical Oxygen Demand Loading from the International Paper – Bogalusa Paperboard Mill (AI# 38036, LPDES# LA0007901) into the Pearl River (Subsegments 090101 & 090107) December 3, 2013.

Threatened & Endangered Species

The Louisiana Department of Wildlife and Fisheries may be assuming jurisdiction over the property in and near the Pearl River owned by the USACE (Pearl River Navigation Channel). The LDWF plans to restore habitat for Gulf Sturgeon and other endangered species with projects such as removing weirs. The primary intent is to restore Sturgeon spawning grounds and population in the Pearl River from Lake Pontchartrain up to the Ross Barnett Reservoir. The hope is to eliminate the endangered / threatened status of this fish.

- Any project implemented downstream of the Ross Barnett Reservoir needs to address minimum stream baseflow and structures that impede habitat and spawning should be identified and mitigations offered.

Additional Alternatives to the Proposed “Levees with Lake”

St. Tammany Parish also objects to the current “Levees with Lake” proposal for the problems listed above. It also does not appear to be optimized for environmental impacts or cost. St. Tammany Parish also objects to the “Levees Only” options due to increases in downstream flooding.

As discussed in the November 20, 2013 Public Meeting, there are other project alternatives that should be considered. Not included in the Feasibility study to reduce Jackson area flooding were nonstructural alternatives (elevations, not just buy-outs), better management of the Ross Barnett Reservoir, and development of better local stormwater management plans.

A nonstructural option that was not discussed in the study or the public meeting was modification to the operation of the existing Ross Barnett Reservoir. This alternative may have the least environmental impact and financial costs. The reservoir appears to have the storage capacity to handle local recreational and water needs while serving at least a limited flood protection role.

- St. Tammany Parish suggests that the Ross Barnett Reservoir be optimized to include some modicum of floodplain storage as an undiscussed nonstructural option.

Finally, local stormwater management is essential to a community’s resilience. For instance, New Orleans has collaborated with international leaders in stormwater management to produce the “Greater New Orleans Urban Water Plan” that allows the area to manage its water resources. Responsible development and redevelopment through local zoning and development regulations is an essential part of “Living with Water” (<http://livingwithwater.com/>).

- St. Tammany suggests that the stormwater management plans for Jackson, Flowood and vicinity be thoroughly evaluated for opportunities to reduce runoff at the source.

Comments above are also supported by St. Tammany Parish Council Resolutions (2008, 2013 and 2018).

EXHIBIT

Summary of St. Tammany Parish Concerns and Recommendations

Low-Flow Concerns:

Flows at the Jackson gage are inadequate to provide the minimal stream baseflow required for the Savannah St, WWTP (227 cfs) during summer critical conditions. Further, the lack of adequate flow may have contributed to the water quality impairments and promulgated TMDL in the area. Additional stream baseflow is required even without the additional losses incurred by the Alt. C impoundment.

- Ross Barnett Reservoir should be encouraged to discharge a minimum flow > 170 cfs required by the MS Board of Commissioners in 1956.
 - Base flow augmentation in the Pearl River from the reservoirs should be studied to determine minimum stream baseflows needed to relieve salt water intrusion impacts in downstream drinking water wells and coastal marshes.
 - Any project implemented downstream of the Ross Barnett Reservoir needs to address minimum stream baseflow and structures that impede habitat and spawning should be identified and mitigations offered.
- A minimum flow release, must be specified in the EIS and included in the reservoir operational plan for Alt. C. to satisfy the needs of NPDES dischargers, water quality, habitat, recreation, navigation and coastal interests,
- The minimum flows from both reservoirs should be formalized through an MOU between Ross Barnett and proposed Alt. C impoundment for flow management and with the States of Mississippi and Louisiana.
- In the Alt. C operational plan, the tandem operations of the two gates from the respective reservoirs must be detailed.
- Ross Barnett operations plan should be reviewed to see if stream baseflow could be augmented when needed to address the environmental impacts in Louisiana resulting from low flow events.
- Salinity monitoring of the CRMS sites in the Lower Pearl River Basin should be continued.
 - Additionally, funding to sample representative community wells would be a benefit to determining long-term impacts of freshwater flow to offset salt water intrusion.
- Ross Barnett Reservoir should be optimized to include some modicum of floodplain storage as a nonstructural option not discussed in the EIS.

Losses during low-flow conditions must be more critically calculated:

- Evaporative losses subtracted from either the Minimum Daily Mean Discharges by Month (Figure 6) or the 10th percentile of Mean Daily Discharges (Table 5) indicate the already-impacted Pearl River will be further compromised.
- Seepage losses/gains in the proposed impoundment were not addressed in the EIS. Losses would require an increased minimum discharge from the Ross Barnett Reservoir in order to maintain adequate downstream flows during low-flow events.

- A geotechnical investigation is needed in order to determine whether there will be gains or losses in the proposed impoundment due to groundwater effects.

High-Flow Concerns:

“Slugs” of water from Ross Barnett Reservoir during high-flow events cause bank erosion and excessive sediment transport to downstream reaches. St. Tammany Parish is concerned with how the proposed impoundment will compensate for the “slugs” from the Ross Barnett.

- As with low-flow considerations, the high-flow operational plan must be detailed in the EIS.
- Sediment transport should be included in the modeling effort in the EIS.

Some sediment is necessary to maintain bank stability, but an excess will add to the over-burdened lower Pearl River.

- St. Tammany Parish would like the EIS to include a discussion of the maintenance procedures to maintain Alt. C storage capacity and to minimize downstream sediment loading.

Water Quality:

Water quality in the tributaries discharging into the proposed impoundment is dominated by NPS from the nine MS4s on those tributaries:

- The EIS must address whether WQ improvements have been achieved in the MS4s and the Ross Barnett discharges in the seven (7) years since the Stormwater Master Plan and TMDL were promulgated.
- Does the proposed impoundment have a plan to improve water quality prior to release?
- In reviewing the discharge from the proposed Alt. C impoundment, MSDEQ and USACE are encouraged to require compliance with the CWA anti-degradation standard upon submittal of the final EIS and again at the USACE permit application.
- Although additional wastewater is accommodated in the 2015 Nutrient TMDL (EPA 2015), it is recommend that a growth factor be included in the EIS model that includes additional stormwater runoff and water supply needs to assure that minimum flow needs and CWA standards are met.
- Although additional wastewater is accommodated in the 2015 Nutrient TMDL (EPA 2015), it is recommend that a growth factor be included in the EIS model that includes additional stormwater runoff and water supply needs to assure that minimum flow needs and CWA standards are met.
- The Ross Barnett Reservoir operational plan should be modified to address its water quality issues and the MS4s should be compelled through regulatory audits to improve water quality from their respective stormwater outfalls.
- St. Tammany suggests that the stormwater management plans for Jackson, Flowood and vicinity be thoroughly evaluated for opportunities to reduce runoff at the source.

Modeling Requirements:

The EIS authors state that the Ross Barnett discharge rate contributes minimally to that of the mouth outfalls.

- Rankin Hinds Pearl River Flood & Drainage Control District should produce a defensible, robust unsteady model of the current conditions and projections for all of the conceptual alternatives.
- The geographic boundary of the hydraulic and hydrologic (H&H) model domain should include the Pearl River watershed from the Ross Barnett Reservoir to the Mississippi Sound and the Biloxi Marshes of Louisiana to provide a more accurate method of quantifying downstream flow impacts.
- A modeling scenario should be conducted using “worse-case conditions” of 10th percentile flow rates and 32^oC temperatures, with a minimum 20% increased loadings to represent a margin of safety for growth.
- A minimum discharge from the Ross Barnett Reservoir and the proposed lake is required to provide adequate stream baseflow in order to minimize environmental impacts.
 - A minimum discharge must be determined from a large-scale modeling effort that satisfies stream baseflow necessary for downstream dischargers, public health, habitat and ecosystem needs.
- An unsteady model showing both maximum flooding and duration of flooding needs to be run for all conceptual alternatives over the entire model domain (Ross Barnett Reservoir to Lake Pontchartrain and the Mississippi Sound).
- Providing a growth factor with consequent discharge and load estimates assures that assimilative capacity and dissolved oxygen are preserved in the stream segments downstream of this discharger.
 - The State of Mississippi should assure that a growth factor is built into this release.
- A Water Budget should be developed for LA from Lake Pontchartrain to LS-MS state line to determine water needs for the Lower Pearl River Basin

Maintenance of existing structures:

A significant amount of debris is reportedly blocking the structure’s weir lessening the amount of fresh water being diverted.

- It is suggested that the USACE conduct maintenance on the Walkiah Bluff structure to assure adequate freshwater to East Pearl during critical low-flow conditions

ST. TAMMANY PARISH COUNCIL

RESOLUTION

RESOLUTION COUNCIL SERIES NO: C-5045

COUNCIL SPONSOR: BLANCHARD/BRISTER PROVIDED BY: ENGINEERING

RESOLUTION IN OPPOSITION OF THE PROPOSED PEARL
RIVER BASIN FLOOD CONTROL PROJECT IN JACKSON,
MISSISSIPPI

WHEREAS, the project for Pearl River Basin flood control was originated in WRDA 1986 and modified in 2007 to authorize the Assistant Secretary of the Army for Civil Works to construct a project to reduce flood risk in the Jackson, Mississippi metropolitan area caused by the Pearl River; and

WHEREAS, the Pearl River Basin, Mississippi Section 211 Feasibility Study - Integrated Draft Feasibility and Environmental Impact Statement ("FS/EIS") was released to the public by the Rankin-Hinds Pearl River Flood & Drainage Control District on June 21, 2018; and

WHEREAS, the selected alternative "Channel Improvements Plan (Alternative C)" in the FS/EIS involves significant channel modifications, including channel excavation and widening of a 9.5 mile reach of the Pearl River, construction of a weir structure, and improvements to levee segments; and

WHEREAS, these modifications will effectively create a 1,500 acre lake in the Jackson, MS area, which will reduce the rate of flow and amount of water flowing downstream in the Pearl River; and

WHEREAS, the reduced flow of water will degrade water quality, thereby having a negative impact on the ecosystem and making permit compliance difficult in St. Tammany Parish and other communities in the lower Pearl River watershed; and

WHEREAS, the reduced flow of water will negatively impact river-based development, recreation and industry in St. Tammany Parish and other communities in the lower Pearl River watershed; and

WHEREAS, St. Tammany Parish Government, having previously passed a resolution (C-3822) in September 2013 opposing the project based on these same concerns, maintains that the Pearl River Basin Flood Control Project will have significant, negative impacts on the quality of life in St. Tammany Parish.

THE PARISH OF ST. TAMMANY HEREBY RESOLVES to oppose the proposed Pearl River Basin Flood Control Project for Jackson, Mississippi.

THIS RESOLUTION HAVING BEEN SUBMITTED TO A VOTE, THE VOTE THEREON WAS AS FOLLOWS:

MOVED FOR ADOPTION BY: MR. LORINO SECONDED BY: MR. TOLEDANO

YEAS: DEAN, FITZGERALD, THOMPSON, LORINO, TOLEDANO, TANNER, GROBY, CANULETTE, BELLISARIO, O'BRIEN, STEFANCIK, BINDER, BLANCHARD, SMITH (14)

NAYS: (0)

ABSTAIN: (0)

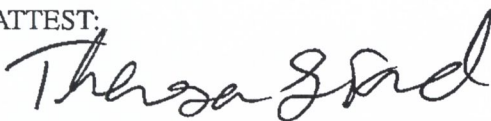
ABSENT: (0)

THIS RESOLUTION WAS DECLARED ADOPTED ON THE 2 DAY OF AUGUST, 2018, AT A REGULAR MEETING OF THE PARISH COUNCIL, A QUORUM OF THE MEMBERS BEING PRESENT AND VOTING.



S. MICHELE BLANCHARD, COUNCIL CHAIRMAN

ATTEST:



THERESA L. FORD, COUNCIL CLERK

ADMINISTRATIVE COMMENT

August 2, 2018

Department of Engineering

Resolution In Opposition Of The Proposed Pearl River Basin Flood Control Project In
Jackson, Mississippi

2018 Regular Session

SENATE CONCURRENT RESOLUTION NO. 5

BY SENATORS MIZELL, HEWITT AND PEACOCK AND REPRESENTATIVES
CROMER, PEARSON AND WHITE



ORIGINATED

IN THE

SENATE

RECEIVED
BY SECRETARY OF STATE

APR 10 2018

ELECTIONS SERVICES

S-213 (R/83)

A large, stylized handwritten signature in black ink, written over a horizontal line. Below the line, the text "SECRETARY OF THE SENATE" is printed in a small, sans-serif font.

SECRETARY OF THE SENATE

SENATE CONCURRENT RESOLUTION NO. 5

BY SENATORS MIZELL, HEWITT AND PEACOCK AND REPRESENTATIVES
CROMER, PEARSON AND WHITE

A CONCURRENT RESOLUTION

To express opposition to the "One Lake" project that proposes to dam the Pearl River and to build a fifteen hundred-acre lake near Jackson, Mississippi, and to urge and request the United States Army Corps of Engineers to deny the pending permit application for the project.

WHEREAS, there is pending a permit application to the United States Army Corps of Engineers, Vicksburg District, to dam the Pearl River and to build a fifteen hundred-acre lake near Jackson, Mississippi; and

WHEREAS, the proposed "One Lake" project requires close scrutiny from all interests that rely on the Pearl River to safely and legally discharge regulated wastewater; and

WHEREAS, the Louisiana Oyster Task Force and the Mississippi Governor's Oyster Council have identified insufficient freshwater quantity flowing down the Pearl River to coastal waters as a threat to oyster production in both states; and

WHEREAS, in Louisiana there are dozens of permit holders in Washington and St. Tammany parishes, including Bogalusa's International Paper mill, and the towns of Bogalusa and Pearl River, that need stable flows and adequate dilution on the Pearl River and its tributaries; and

WHEREAS, the Pearl River is on the Mississippi Department of Environmental Quality's Impaired Waters List due to wastewater going into the Pearl River from runoff from parking lots, farms, and septic tanks, resulting in too much nitrogen and phosphorus ending up in the Pearl River, and necessitating limits on these pollutants in existing permits held by business, industry, and municipalities; and

WHEREAS, increased nitrogen and phosphorus compounds cause excess algae and plankton to grow, and too much algae and plankton choke the life out of a river, which combined with high summer temperatures, rob the water of oxygen and may cause fish kills; and

SCR NO. 5

ENROLLED

WHEREAS, water flow of the river where waste mixture is released is important;
and

WHEREAS, permit holders need adequate water in a receiving stream to mix with
and dilute wastewater; and

WHEREAS, the Pearl River has reduced water flows in summer and fall when
rainfall amounts are seasonally low; and

WHEREAS, dams also threaten to limit water flow, making it hard for existing
wastewater discharge permit holders to comply; and

WHEREAS, in 2013, the St. Tammany Parish engineering department examined
evaporation predictions for the proposed "One Lake" project and calculated a possible
reduction of ninety cubic feet per second of flow at their end of the Pearl River, which
reduction could have a significant adverse impact on permits and the health of the Pearl
River downstream.

THEREFORE, BE IT RESOLVED that the Legislature of Louisiana does hereby
express its opposition to the "One Lake" project that proposes to dam the Pearl River and
build a fifteen hundred-acre lake near Jackson, Mississippi, and urge and request the United
States Army Corps of Engineers, Vicksburg District, to deny the pending permit application
for the proposed "One Lake" project.

BE IT FURTHER RESOLVED that a copy of this Resolution be transmitted to the
commander of the United States Army Corps of Engineers, Vicksburg District.

BE IT FURTHER RESOLVED that a copy of this Resolution be transmitted to each
member of the Louisiana delegation to the United States Congress.



PRESIDENT OF THE SENATE



SPEAKER OF THE HOUSE OF REPRESENTATIVES